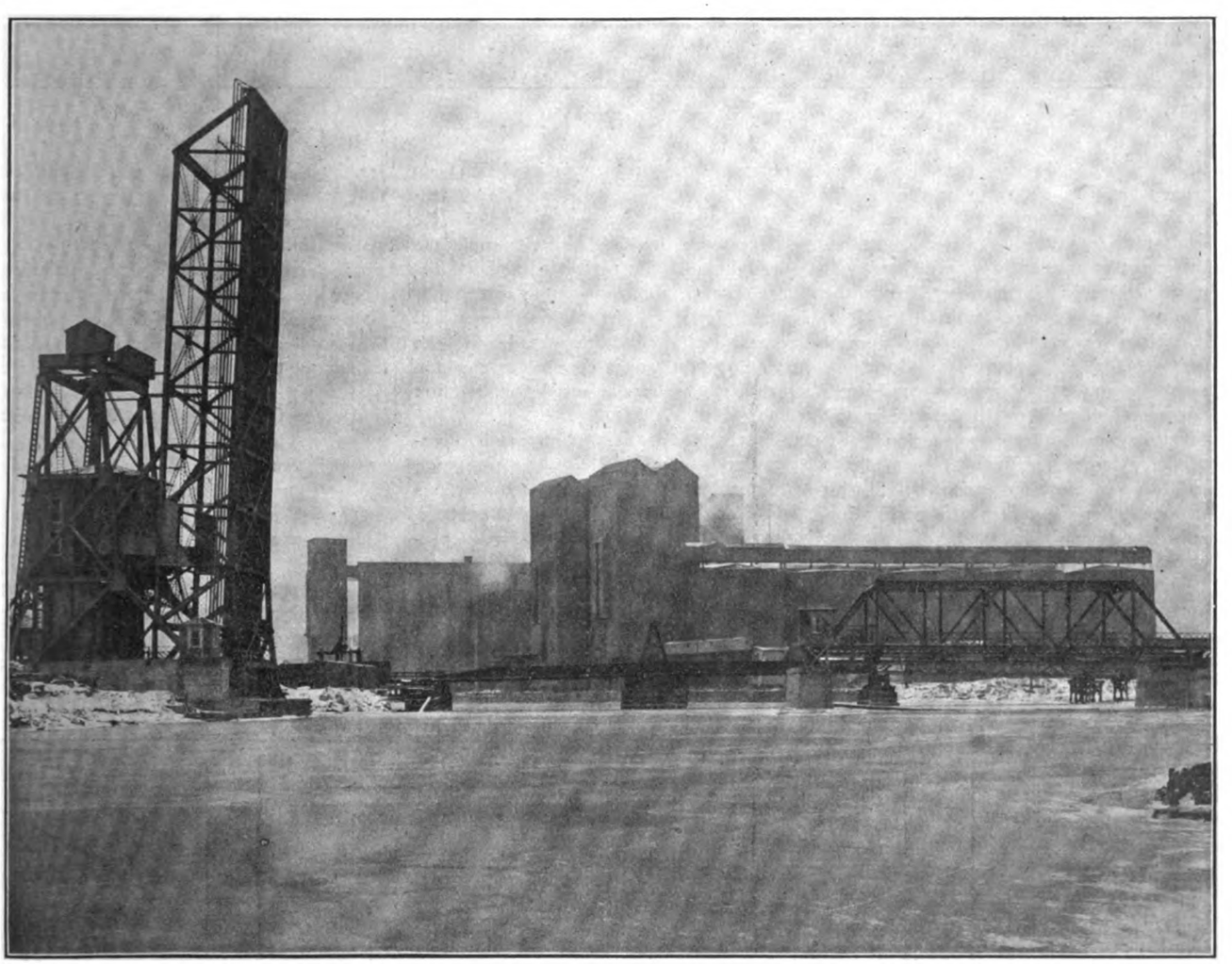
THE MARINE REVIEW

VOL. XXXVI. CLEVELAND, JULY 25, 1907. NEW YORK No. 4



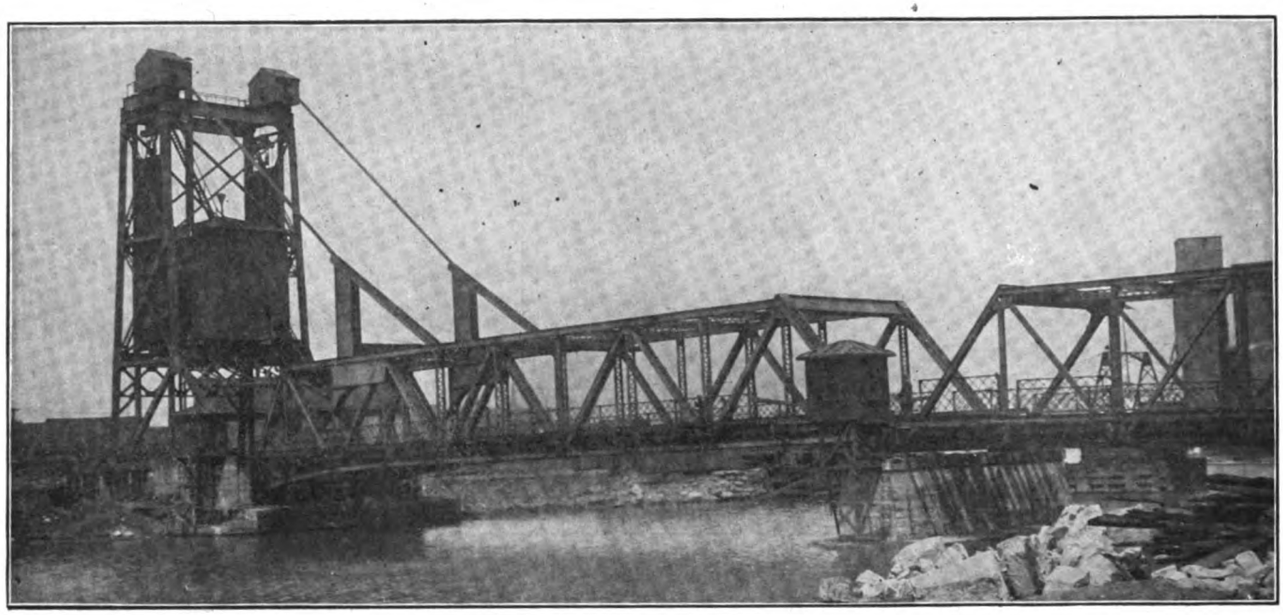
OHIO STREET LIFT BRIDGE OVER BUFFALO RIVER, BUFFALO, LIFT SPAN RAISED.

NEW LIFT BRIDGE OVER THE BUFFALO RIVER.

Buffalo, July 16.—A lift span bridge, one of the largest ever built, is nearing completion here. With the exception of a few minor details and reinforcements, made necessary by the increased weight of cars which will pass over it, the bridge construction is complete. It is known as the Ohio street bridge and serves as an outlet from the city into the roadway known as the Hamburg turnpike. The bridge spans the Buffalo river and the traffic of large vessels made the bridge a necessity. It will greatly facilitate navigation in the Buffalo river, the small and old-fashioned features of the former bridge having caused much trouble for commercial interests and being responsible for a number of serious accidents besides obstructing the passage of vessels of the larger class.

It is nearly three years since the first work was done which led to the building of this structure. The old swing bridge, which stood where the new lift span

Generated on 2024-08-28 13:59 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN



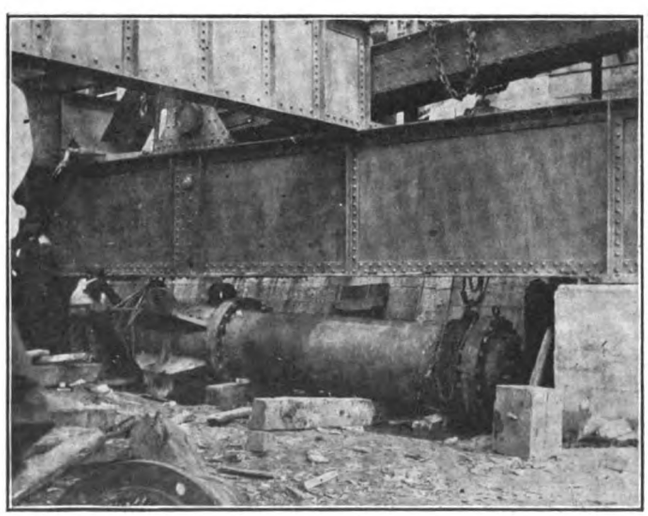
OHIO STREET LIFT BRIDGE OVER BUFFALO RIVER, BUFFALO, LIFT SPAN LOWERED.

bridge now stands, was moved to a temporary location. Then it was necessary to deepen the channel. This was a difficult task inasmuch as the river bed at this point is practically of solid rock. It was accomplished, however, and the channel was deepened from 19 to 23 ft. As this work was done under a general contract for deepening various portions of the channel, the progress made was not as rapid as it might have been and for this reason there was a good deal of delay in setting the first pier at the end of the north approach. But with the exception of strikes the work progressed well until the end. The first metal for the bridge was placed April 13, 1906, but the foundation was begun in June of the previous year.

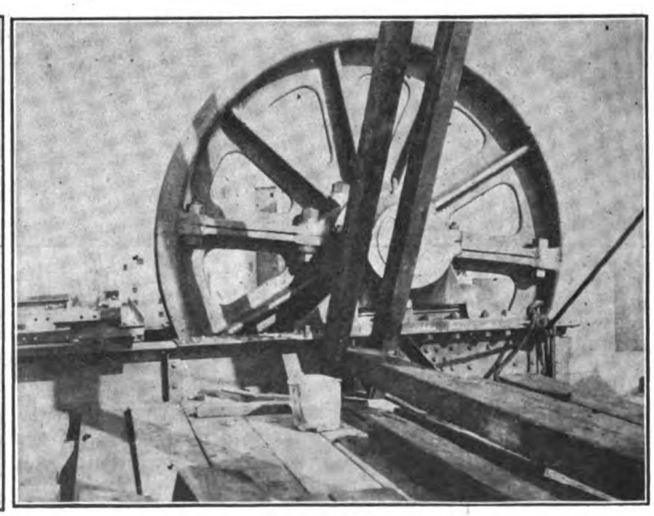
Original plans called for a bridge which would support at least four 40-ton electric cars, but the changes in traffic methods have made it advisable to operate 50-ton cars over the bridge. Engineers made a careful study of the bridge and decided that it could be strengthened sufficiently to support the heavier cars, and, as soon as material is out of the shop, the track stringers will be reinforced, additions made to the counterweight, and a few minor changes. The lift span was lowered for the first time, May 18, 1907.

Total cost of foundations and superstructure was $176,960, the superstructure costing $117,700, and the foundations $59,260. The Pittsburg Steel Construction Co., had the contract for superstructure and the foundation contract was let to Bardol & Roberts, of Buffalo, but practically all of the foundation work was sub-let to the Buffalo Dredging Co. Capt. G. H. Norton, of the City Engineer's office, had charge of the erection. Concrete was used for all of the foundation work. The height of the cable sheaves is 103 ft. 6 in. above water, riding a 28-ft. roadway. The moving span has plank floor, differing from the approach span which has a flooring of concrete and sidewalks of the same material. Brick was used in laying out the roadway of the approach. The truss height is 21 ft.; width of bridge, 44 ft. There is a 1 per cent grade on the lift span, while the approach span has a 2 per cent grade down from center pier to abutment.

Of the superstructure the tower was built first and then the moving span, which was built in a vertical position. The stationary approach was the last task undertaken in the erection of the superstructure. Including the tower, the bridge has three spans, the length of the lift span being 166 ft., and the



OPERATING CYLINDER GIRDERS AND UNDER TOWER SPAN.



CABLE SHEAVE ON TOP OF TOWER.

Generated on 2024-08-28 14:02 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

stationary approach span 100 ft. 6 in. The length of the tower span is 52 ft.

The lift span is operated by hydraulic pressure. The tank which was constructed in the tower is divided into four sections. Two are high pressure and two are low pressure. The low pressure tanks are 50 in. diameter and 16 ft. high. The high pressure tanks have a diameter of 30 in. and are 12 ft. high. The low pressure tanks withstand 150 lbs. pressure to the square inch, the others 300 lbs. The high pressure tanks are used in emergency cases only, when it is desired to operate slowly in times of wind or storm or after a heavy snowfall. The 150-pound tanks are used for ordinary operation. The signal system has not been installed, but shortly will be and the signals adopted by the United States Lighthouse Board will be used. Electric lights will also be installed on the bridge. Two tenders and one engineer are required in the operation of the bridge, working in three shifts. The Osborn Engineering Co., of Cleveland, designed the bridge and Thomas E. Brown, of New York, supplied the machinery.

MARINE LECTURES AT COLLINGWOOD.

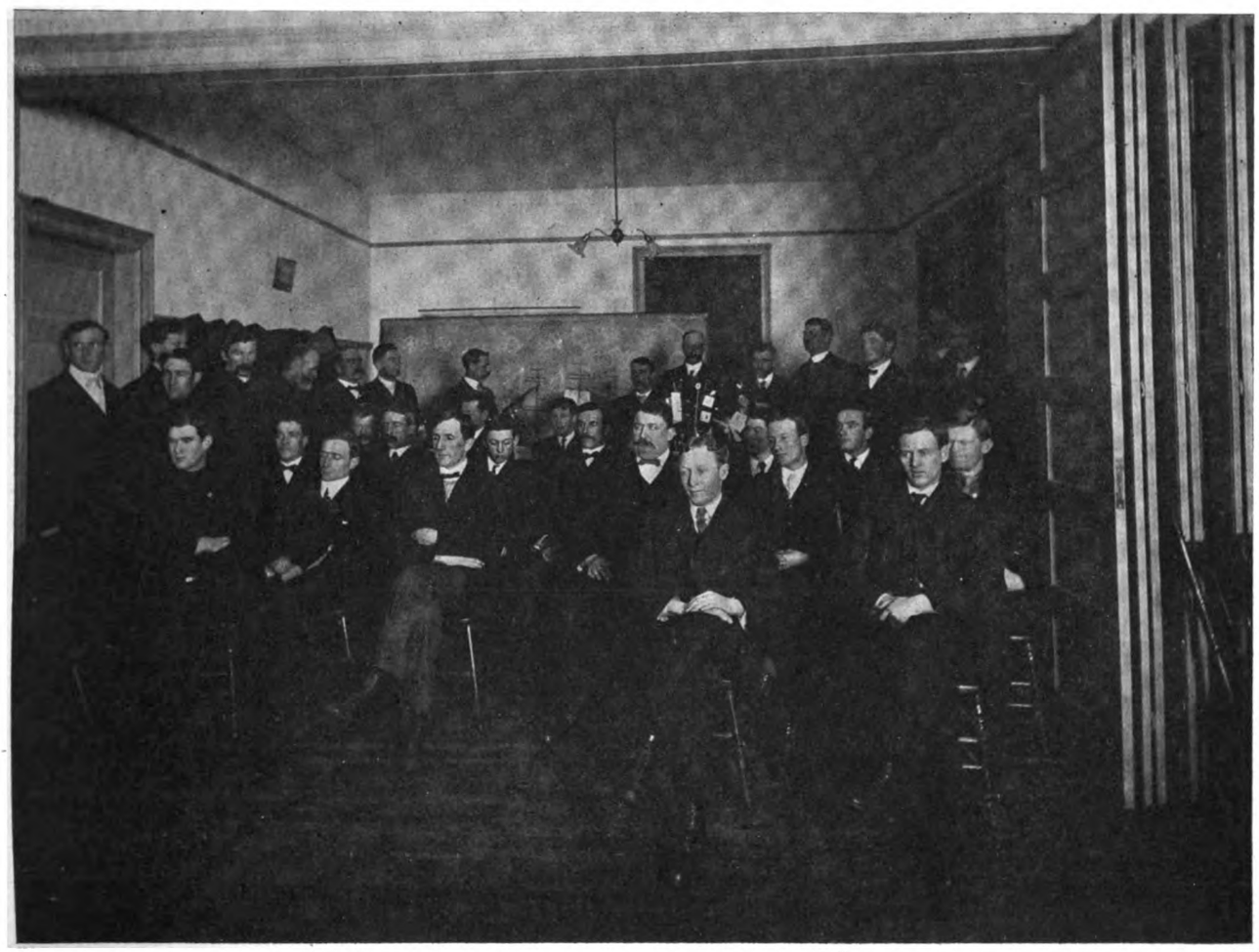
In December, 1906, a course of interesting lectures was delivered at the Y. M. C. A. building at Collingwood on marine matters, particularly to encourage interest amongst the mariners of the district. The government of Canada has taken the matter in hand, establishing the lectureship at different locations in the dominion, paying the lecturers themselves, and supplying a first class outfit of models, charts, and instruments of all kinds.

At the first meeting there were fifty-nine in attendance, and the average attendance during the course of lectures, about thirty. The subjects lectured on consisted of the laws governing the lakes, history and description of the compass, magnetism, adjustment of the compass, variation and deviation, practical demonstration of the rule of the road, life saving apparatus, anchorage, flags and signals, semaphore, Morse, barometer, thermometer, construction of vessel, sails, storage of cargo, insurance, saving life at sea, and other subjects that were instructive and deeply interesting to those that attended.

The lectures were illustrated on the black board, but next season it is the intention of the dominion government to supply the lecturer with lantern and slides.

Capt. Coles' experience has not been entirely confined to salt water, but he also has had eight years of inland water navigation, British Columbian waters and has sailed across Canadian lakes. It is understood that Capt. Coles will take over these lectures next year, and run them on similar lines. A nautical school will also be established. Of course there will be a fee, as regards the school, but the lectures will be thrown in, as they are supported by the dominion government. Capt. Coles is also the dominion government examiner of masters and mates.

Capt. Coles is much pleased with the encouragement he has received. He has letters from the dominion government, different associations, steamship managers and from quite



CAPT. COLES' NAUTICAL CLASS AT COLLINGWOOD.

Generated on 2024-08-28 13:58 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

a number of men that attended his lectures, expressing their appreciation of what was done in Collingwood for the sailors during the season of 1906 and 1907. Capt. Coles says that he has been assisted in his lectures by Clarence E. Long's articles now running in the MARINE REVIEW.

MORE ABOUT STARBOARD AND PORT.

The nautical term starboard, as every sailor knows, is toward the right looking forward on a vessel. It has many phrases: such as starboard bow, starboard beam, starboard quarter, starboard watch, starboard tack, starboard helm, starboard gangway, etc., etc., in fact, anything pertaining to, situated or turned to the right on board ship.

Starboard is derived from the Anglo-Saxon words "steer board" or "steer side," so called because in the ancient galleys the steersman held the steering-oar, fastened to the right of the center of the stern in the right hand.

Starboard and port are the sea equivalents of right and left respectively.

Port. This word has many distinct meanings. Its purely nautical use, however, is for left as opposed to starboard—right. Port was not so many years ago called "larboard," which likewise means the left side of a vessel when facing forward, or toward the bows; such as larboard tack, larboard watch, etc. Larboard is now obsolete, having been officially superseded by "port," to avoid confusion by similiarity of sound with starboard. On account of the resemblance in sound of these two terms no end of confusion arose while larboard was employed. Bear in mind that both have the same meaning, but that it is incorrect to use "larboard" for port. Hence, the expressions: the port tack, the port rail, the port watch, the port quarter, the port bow, etc., etc.

Official recognition was given to the term "port" in substitution for the term "larboard" by George Bancroft, secretary of the navy, by an order dated Feb. 18, 1849.

Larboard is believed to be a corruption of "lower board," that side of the vessel being considered inferior to the starboard.

The schooner Emma L. Coyne was sunk in the Detroit river at the lower end of Fighting Island as the result of collision with the steamer Wallula. The Coyne was bound down in tow of the steamer J. C. Pringle. The schooner was badly damaged but a tug succeeded in taking her near Ballard's Reef, where she sank.

SHIP BUILDING DURING JUNE.

The bureau of navigation reports 113 vessels of 63,025 gross tons were built in the United States and officially numbered during the month of June, 1907, as follows:

	WOOD				STEEL				TOTAL	
	Sail		Steam		Sail		Steam			
	No.	Gross	No.	Gross	No	Gross	No.	Gross	No.	Gross
Atlantic and Gulf	13	1,080	33	1,700	1	34	13	24,162	60	26,986
Porto Rico	2	21	....	.....	....	.....	....	.....	2	21
Pacific	....	.....	15	379	....	.....	....	....	15	379
Hawaii	....	.....	....	.....	....	.....	....	.....	....	.....
Great Lakes	....	.....	11	133	....	.....	5	35,004	16	35,137
Western Rivers	....	.....	20	502	....	.....	....	.....	20	502
Total	15	1,111	79	2,714	1	34	18	59,166	113	63,025

The largest vessels in this list are the lake-built boats. L. S. DeGraff, Wilpen, George F. Baker, Thomas Lynch and Smith Thompson, and the coast boats Saratoga, Creole and Bunker Hill.

SHIP BUILDING FOR FISCAL YEAR.

The bureau of navigation reports 989 sail and steam vessels of 423,577 gross tons built in the United States and officially numbered during the year ended June 30, 1907, as follows:

	WOOD				STEEL				TOTAL	
	Sail		Steam		Sail		Steam			
	No.	Gross	No.	Gross	No.	Gross	No.	Gross	No.	Gross
Atlantic and Gulf	145	16,616	308	14,748	9	5,452	71	111,459	533	148,675
Porto Rico	5	51	....	.....	....	.....	....	.....	5	51
Pacific	14	3,182	165	15,670	....	.....	1	8,579	180	27,431
Hawaii	....	.....	....	.....	....	.....	....	.....	....	.....
Great Lakes	3	35	60	1,694	....	.....	47	238,713	110	240,412
Western Rivers	....	.....	158	5,064	....	.....	3	1,914	161	6,978
Total	167	19,884	691	37,176	9	5,452	122	360,665	989	423,577

During the corresponding year ended June 30, 1906, 1,079 sail and steam vessels of 348,345 gross tons were built in the United States and officially numbered, as follows:

	WOOD				STEEL				TOTAL	
	Sail		Steam		Sail		Steam			
	No.	Gross	No.	Gross	No.	Gross	No.	Gross	No.	Gross
Atlantic and Gulf	217	29,710	389	16,702	8	3,506	52	43,221	666	93,139
Porto Rico	2	15	....	.....	....	.....	....	.....	2	15
Pacific	20	3,412	113	7,420	....	.....	1	347	134	11,179
Hawaii	....	.....	....	.....	....	.....	....	.....	....	.....
Great Lakes	7	190	64	1,534	....	.....	52	237,724	123	239,448
Western Rivers	....	.....	150	4,115	....	.....	4	449	154	4 564
Total	246	33 327	716	29 771	8	3,508	109	381,741	1,079	348.345

COMPARATIVE STATEMENT.

1907	No.	Gross
Sail and Steam	989	423,577
Unrigged	375	87,288
Total	1,364	510,865

1906	No.	Gross
Sail and Steam	1,079	348 345
Unrigged	384	73 399
Total	1,463	421,744

Charles Culver, chief engineer of the big steamer B. F. Jones, has resigned and Engineer Quin, who was waiting in Cleveland to take out a new boat, was sent to Ashtabula to join the Jones.

ITEMS OF GENERAL INTEREST.

The steamer I. N. Foster, owned by Lars H. Jensen, Sturgeon Bay, Wis., broke her shaft when 20 miles off the Sturgeon Bay canal, bound for Holland, Mich. The steamer was loaded with stone and had the barge Oakleaf in tow. She was towed to Manitowoc for repairs.

At the annual meeting of the Longshoremen's Association held in Detroit last week, President D. J. Keefe and Secretary-Treasurer John F. Joyce were re-elected. The vice presidents elected are: T. V. O'Connor, Buffalo; W. E. Fuller, Chicago; T. Fahey, Buffalo; M. Kelleher, Ashtabula; J. G. O'Neill, Duluth; O. A. Anderson, Galveston; J. J. Higgins, New Orleans; I. H. Sanderson, Toronto; Ralph Clemens, Mobile; J. B. Phillips, Brunswick, Ga.

An Antarctic expedition has been organized by Lieut. Shackleton, who was a member of Capt. Scott's crew, and it is shortly to leave London for the far south. Lieut. Shackleton has secured an ideal vessel for his purpose in the Endurance, which as the Nimrod spent many seasons in the north Atlantic in search of seals. The headquarters are to be on King Ed-

Generated on 2024-08-28 14:07 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

ward VII Land, a virgin field for exploration. The exploration is to continue for two years, the Endurance returning to New Zealand after the first winter for supplies.

Capt. E. Francke, of the wrecked steamship Dakota has appealed to United States Supervising Inspector Captain John Bermingham from the decision of the United States local inspectors at Seattle recommending that no license should be issued to him for two years and six months, his license having expired during the investigation. Francke takes the ground that the rules of the department do not allow inspectors to refuse a license to any competent man. Should his contention be true he will escape punishment other than the official reprimand for the loss of the ship.

The Toyo Kisen Kaisha Trans-Pacific line will begin the retirement of the fleet consisting of the American Maru, Hongkong Maru and the Nippon Maru from their service at once and will replace these three vessels with three larger ones, two of which are now building, while the steamers now visiting San Francisco will ply between the Orient and South American ports. The new vessels will be between 5,000 and 6,000 tons displacement, which is about 1,500 tons larger than those in service at present. The new boats are to be fitted with turbine engines and will burn oil for fuel.

The Toledo Fuel Co. has leased a new dock in the Toledo & Ohio Central slip. The dock is directly opposite the Brown ore unloading machines, and so located that tow barges or steamers can readily heave across the slip and take on fuel during the noon hour or after quitting time. The dock will also be used for loading the company's fuel lighter. The material for the new dock is all on the ground and two pile drivers are ready to begin work at once. It will be equipped with a McMyler machine of 20 tons capacity. The new machine will be shipped this week.

The Kumeric and the Suveric, the two largest steamships of the Wier fleet, are soon to be placed in a regular steamship service from Seattle to Japan and China, going through to Manila. The vessels will be run in conjunction with the fleet of the Boston Steamship Co., the sailings being so arranged as to come in between those of the Boston Steamship Co. These two vessels, with the exception of the Minnesota, are the largest to engage in the Oriental trade, having a cargo-carrying capacity of 17,000 measurement tons or 12,000 tons dead weight. Both ships are practically new.

A magnificent silver service was presented to the battleship Kansas at the League Island navy yard on June 17, the state of Kansas being the donor. The presentation speech was made by Gov. E. R. Hoch, the ceremony being held on the main deck of the battleship and being witnessed by a number of prominent residents of Kansas and by naval officers. The decorative scheme of the service includes the sunflower, the emblem of the state of Kansas, and the seals of the state and the navy. The Kansas chapter of the Daughters of the American Revolution also presented the ship with a stand of colors.

The rumor is again current on the Pacific coast that the Pacific Steam Navigation Co. may extend its line from Panama to San Francisco and Puget Sound. It is also probable that the far east will be included by the institution of a triangular service, the vessels to go up the coast from Salina Cruz, proceeding to the far east and back to Salina Cruz, omitting a call at Honolulu. The company has added a tonnage of about 18,000 to its fleet in the past year, its fleet aggregating altogether more than 200,000 tons, while five new vessels have been ordered recently.

The passengers on the American liner Philadelphia bound for New York were recently treated to the unusual sight of a mirage of the French liner La Lorraine, which was at the time twenty-five miles ahead of the Philadelphia and slightly off the starboard bow. The reflection was of an inverted vessel sailing across the sky with smoke pouring from her stacks and with passengers walking about on her decks. So clear was the likeness that those on the Philadelphia could make out the officers on the bridge and the captain pacing up and down. The mirage lasted for an hour and a half.

The Delaware, Lackawanna & Western railway has purchased of the Norfolk & Washington Steamboat Co., its ferry steamers Woodbury and Callahan, recently built for the service between Washington, D. C., and Alexandria, Va. The Woodbury was under charter to the Old Dominion Steamship Co. for its Jamestown exposition service but she has been released by that company and together with the Callahan will be employed in the ferry service at New York. The latter, now under charter to the Chesapeake & Ohio Railway Co. for exposition service is not to be released until November.

To diminish the rolling of vessels, M. V. Cremieux has devised a new compensator, which, it is said, so diminishes the amplitude of oscillations, that those which would make an angle of 22 deg. with the vertical are reduced by about 17 deg. Inside the vessel, regarded as a kind of pendulum, is placed a second pendulum, oscillating round an axis which coincides with the vessel's own axis of oscillation. This pendulum is immersed in a chamber completely filled with a viscous liquid; and, when the vessel rolls, the pendulum mass, which always remains in the vertical line passing through the ship's center of gravity, will, it is claimed, tend to lessen the oscillatory motion.

The appropriation of $60,000 for the building of a new buoy boat to assist the United States beacon light Lilly in her service of the fifteenth lighthouse district, comprising from Cairo to St. Paul on the upper Mississippi, and from St. Louis to La Salle on the Illinois river, and the Missouri to Kansas City, will be available after July 15 and no doubt the construction of the steamer will be commenced. Estimates are now being taken. As the Missouri river has a line of steamers, service that has been abandoned in that stream will be inaugurated and the buoy boat will be a great accession, aiding the Lilly in her vast territory.

When the German battleships Schlesien and Schleswig-Holstein have been launched Germany will have twenty-four battleships afloat, having each a displacement of from 10,000 to 13,200 tons. In the new period of naval construction which will now begin the displacement will be increased to 18,000 tons and the armament will be completely altered. It is expected that this will increase the cost of building from £1,212,500 to £1,825,000. The twenty-four battleships above mentioned constitute the total output in battleships during the reign of the present emperor. Of this number eighteen have been built in private yards and only six in government yards.

Commodore Robert G. Denig, U. S. N., was recently relieved of the command of the department of steam engineering at the League Island navy yard by Commdr. J. K. Barton. Since Commdr. Denig took charge of the department four years ago, the antiquated machinery and frame sheds have been abolished and there now stands near the head of the new dry dock a modern machinery plant, installed in the handsomest buildings of the kind owned by the government. The last of these, the machine shop, was formally opened recently. In a farewell address to his force Commdr. Denig said that the yard will be the greatest and most important navy yard in the United States. Commdr.

Generated on 2024-08-28 14:04 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Denig will become a general inspector with his principal offices at the Midvale Steel Works.

It is believed that the Russian government has at last decided to sell the great Nevski ship yard to the English group of financiers known as the United Finance Corporation. The German and American groups of financiers which desired the yard are thus defeated. The concession will probably prove valuable as the government builds cruisers, torpedo boats and submarines at this yard and will undertake to continue to give the yard its full proportion of all state contracts and offers a guarantee that the orders shall be of a specified value per annum. The decision in the face of the strenuous efforts of the German and American syndicates to get possession of the yard is said to be due to the desire of the Russian government to promote friendliness between Russia and Great Britain.

Another chapter has been added to the attempt to shorten the time of passage for passengers and mails of the trans-Atlantic lines for Montreal through the trans-shipment of them at North Sydney, N. S., the journey thereto by rail being accomplished in seven hours less time than is consumed by the liners. The little Canadian government steamer Montcalm, which has been attempting the transfers, was first quite badly damaged by being carried against the side of a liner and now is reported to be ashore on a bar at the entrance of Sydney harbor, after a trip out to the Canadian Pacific liner Empress of Ireland, whose commander refused to attempt the transfer of the passengers and mails in the fog.

Bodies of four of the eleven men drowned in the sinking of the naval launch in Hampton Roads recently have been recovered. The launch has been raised and on examination it is believed to have been crushed by a wire cable towline. It is apparent that the senior of the six midshipmen realized the dangers of the trip, as the night was black and squally, and a strong ebb tide was running against a stiff half gale. That he went forward to a place beside the coxswain was shown by the fact that a handkerchief, marked with his initials, was recovered from the coxswain's box. The finding of the handkerchief and the fact that the helm was hard over and the engine set for backing shows that whatever brought about the disaster, inattention on the part of the men in the launch was not a contributory cause.

It is announced by the navy department that the president has approved the report of the naval personnel board, which has selected for compulsory retirement under the terms of the naval personnel act the names of fifteen officers, including five captains, four commanders, four lieutenant commanders and two lieutenants. The list is as follows: Captains—Albion V. Wadhams, Richard G. Davenport, James P. Bull, Rogers H. Gall, and Frank E. Sawyer. Commanders—William Winder, John F. Parker, John C. Colwell, and William G. Cutler. Lieutenant Commanders—Lewis J. Clark, Charles S. Stanworth, William H. McGrann, and George Mallison. Lieutenants—Charles Webster and Newton Mansfield. The captains retired are engaged in the following duties: Capt. Wadhams is captain of the Norfolk navy yard; Davenport is captain of the battleship Georgia; Bull is commandant of the naval training station at Yerba Buena, Cal.; Gall is president of the naval court-martial at Norfolk and Sawyer is commandant of the naval training station at Newport, R. I.

The secretary of the department of commerce and labor has approved the findings of the commission appointed to investigate the charges against Henry M. Seeley, inspector of hulls of the port of New York, preferred by his colleague, Theodore T. Mersereau, inspector of boilers at the port of New York. The commission, which consisted of Lawrence O. Murray, assistant secretary of commerce and labor, and Herbert Knox Smith, the commissioner of corporations, reports that "each and every charge against Mr. Seeley should be absolutely dismissed as there is nothing to support any of them, in any way, shape or form whatsoever. We do not deem it necessary to take up these charges separately or to consider in detail in this report the facts brought out in evidence. The reason for taking this position is because of the absolute insufficiency and triviality of the evidence produced to support the charges. We find absolutely nothing to justify, even in the slightest way, any impropriety in his official conduct; nothing to show any lack of ability or fidelity to duty."

Rear Admiral Burwell, commandant of the Puget Sound navy yard at Bremerton, Wash., has sent an urgent request to the navy department for the construction of two more dry docks in addition to the one authorized by congress a year ago, and upon which construction has just commenced. Rear Admiral Burwell believes that with the natural increase of the fleet upon the Pacific and considering the fact that the deeper draught vessels cannot get into the dry dock at the navy yard at Mare Island, Cal., extensive additions will have to be made at Bremerton.

It is uncommon for a plow to be used in discharging a cargo from a steamer, but one was recently used in discharging a cargo of niter from the German steamer Ammon at San Francisco. The niter had in some manner congealed in the vessel's hold and was so hard that the stevedores could not make an impression upon it with picks and shovels. Capt. Harry Goddale and Capt. Bennett, of the California Stevedoring Co., were in a quandary as to what to do when one of the stevedores suggested that a plow would solve the problem. Tackle was fitted to the plow, power being supplied from the winch, and it was found to work successfully, the plow digging deep furrows into the niter.

A bill for subsidizing the proposed line of steamers from Norway to Cuba, Mexico and the southern states has now been laid before the Norwegian Storthing, the amount of the state aid asked for being an annual allowance of 100,000 kronor for the period of three years, and a member of the Storthing Committee on Ways and Communications has given notice of a motion to the effect that government shall take up shares in the new undertaking to the extent of 300,000 kronor. At a conference just held between the aforesaid committee and Mr. Bryde, the ship owner who is promoting the new line, Mr. Bryde made a proposal that, in the interests of the fish-exporting trade, three vessels, instead of two, should be put into the line, so as to make it possible to dispatch a steamer once a month instead of once in six weeks. The committee could not, however, fall in with this suggestion, and recommended that a third boat should be put on after the service had lasted a year and a half. An understanding was arrived at, however, as to the ports the steamers will be bound to call at on the outward voyages, namely, at first, Stavanger, and, later on, Christiansand and Christiana. Some northern ports will also be included in the itinerary if it should appear advisable, and Bergen will be regularly visited as soon as it may prove practicable. It has been further settled that the rates of freight shall not exceed the lowest existing rates via Hamburg, but the maximum figures will require government sanction. It was reported some time back that Mr. Bryde's application for a subsidy had been refused, but the introduction of this bill into parliament points to a change of policy in that respect.

Generated on 2024-08-28 14:04 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

GOVERNMENT WORK ALONG THE OHIO RIVER.

Capt. F. C. Boggs, government engineer with headquarters at Wheeling, W. Va., in his annual report for the fiscal year ended June 30, 1907, thus reports the progress of work in his district:

OHIO RIVER.

Work in the Wheeling, W. Va., district consists of the construction of locks and dams Nos. 8, 11, 13, 18, 19 and 26, the total amount expended on these works being $1,686,-037.67.

The canalization of this section of the river (Pennsylvania State line to Cincinnati) is not far enough advanced to benefit navigation, and, therefore, has had no effect upon freight rates.

It is difficult to obtain commercial statistics for this section of the river, and the information received from the different cities is of little value, as no accurate record appears to be kept of tonnage and passenger traffic.

The following is a statement of the condition of the works:

Dam No. 8.—Work at this site was confined to the lock and guide walls and esplanade. The lock and guide walls were completed for 6-ft. navigation, and are being raised to meet the 9-ft. requirement of the last river and harbor act; paving of lock chamber was finished. About 85 per cent of the work contracted for is completed. Plans for the dam are in preparation.

Dam No. 11.—Progress on the lock and guide walls, to which the work at this site is limited, has been very unsatisfactory. The following is the condition of the work: Entire land wall, 305 linear feet of river wall, walls for upper and lower gate recesses, and 215 linear feet of lower guide wall are completed, except additional height to provide for a 9-ft. navigable depth; 160 linear feet of lock chamber paved for a width of 55 ft.; and considerable foundation work for walls, gate tracks, etc., placed. Not over 45 per cent of the work contracted for is completed.

Dam No. 13.—The lock walls, part of the guide walls, paving of lock chamber, and a portion of the powerhouse foundation are completed.

Under a contract for the construction of the dam, the following portions have been completed: Retaining wall, abutment, foundations for both bear traps, Pier A, Pier B, and 179 linear feet of navigation pass (except wickets). Fully 40 per cent of the work contracted for is completed.

Dam No. 18.—Masonry of lock and filling of esplanade are completed.

Progress under contract for construction of dam has been very unsatisfactory. The contractor having failed, work is being carried on by the receiver. At the close of the fiscal year the following portions were completed: Abutment, 569 linear feet of navigation pass (except the placing of 70 wickets), and part of the foundations for east bear trap and Pier C. Less than 50 per cent of the work contracted for is completed.

Dam No. 19.—All the land for this site is owned by the United States.

Dam No. 26.—Preparations were made for locating the site.

KANAWHA RIVER.

The improvement of this river, which is practically completed, extends 6-ft. navigation for a distance of 90 miles from the mouth (Point Pleasant, W. Va.). It consists of ten locks and dams, two of which are fixed dams and eight movable of the Chanoine type. The total amount expended on this improvement is $4,-223,830.26 for construction, and $777,-960.02 for operating and maintenance.

The commerce for the calendar year 1906 amounted to 1,327,703 tons, of which there were 1,176,300 tons of coal and 75,234 tons of timber products.

Navigation on the river was practically continuous during the fiscal year.

LITTLE KANAWHA RIVER.

The government now owns all the locks and dams (five) on the river, having purchased locks Nos. 1 to 4 from the Little Kanawha Navigation Co. on Nov. 1, 1905, at a cost of $75,000. These locks were in very bad condition and require extensive repairs.

During the fiscal year lock No. 4 was repaired and preparations made for extensive repairs at locks Nos. 1 and 2.

Congress, in the act of March 2, 1907, provided for a number of betterments which, when completed, will greatly improve navigation on this river.

The amount expended to June 30, 1907, is $337,165.13 for improvement, and $50,855.53 for operating and maintenance.

The structures provide 4-ft. navigation for a distance of 48 miles from the mouth of the river (Parkersburg, W. Va.). Flatboat navigation extends to Burnsville, about 120 miles above Parkersburg.

During the calendar year 1906, 70,-289 tons of freight passed lock No. 5. This is a considerable decrease to the former years, due to the closing of navigation through locks Nos. 4 and 5 for over three months.

CLASSIFYING LAKE VESSELS.

The Record of American and Foreign Shipping was started by the American Ship Masters' Association in 1867. At that time the Shipmasters' Association issued licenses to shipmasters, but later this function was taken over by the government itself. The American Ship Masters' Association was reorganized in 1898 and became known as the American Bureau of Shipping and has continued ever since to publish the Record of American and Foreign Shipping. As a classification for ocean vessels it is quite complete, but for some years past it lost prestige on the lakes owing to the fact that its rules did not conform to lake practice. The American Bureau of Shipping is now, however, arranging new rules for the classification of lake vessels. They will be published as soon as they have been properly formulated. Twelve vessels are this year being built on the lakes under the inspection of Nacey & Hynd of Cleveland, who are the lake representatives of the American Bureau of Shipping, and will be classed in this year's Record.

JAPANESE ADMIRAL'S VISIT.

Admiral the Baron Yamamoto, who was the Japanese Minister of Marine during the Russo-Japanese war and who has been spending several months in Europe studying naval improvements, arrived in New York last week on the Carmania. The admiral is accompanied by five Japanese naval officers and it is expected that they will, in pursuing their studies, visit the navy yards at New York, Boston, Philadelphia, Washington and Norfolk and possibly one of two on the Pacific coast. The visit to the United States is to conclude the inspection tour of the world's naval powers.

The United States Lake Survey has received word from Major Graham D. Fitch, United States Engineer at Duluth, that a bar is forming between the entrance piers at Lac La Belle, east side of Keweenaw Point, Lake Superior. The bar extends from abreast of the shore line outward, with from 10 to 12 feet of water on it, so that a boat drawing over 10 feet cannot enter. This entrance channel is not maintained by the government, but was dredged by the Keweenaw Central Railroad Co. to reach its terminal at Mendota on the inner lake.

Generated on 2024-08-28 14:01 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

THE MARINE REVIEW

DEVOTED TO EVERYTHING AND EVERY INTEREST CONNECTED OR ASSOCIATED WITH MARINE MATTERS ON THE FACE OF THE EARTH.

Published every Thursday by

The Penton Publishing Co.

CLEVELAND.

BUFFALO ..... 932 Ellicott Sq.
CHICAGO ..... 1362 Monadnock Blk.
CINCINNATI ..... 124 Government Place.
NEW YORK .....1005 West Street Bldg.
PITTSBURG ..... 521 Park Bldg.
DULUTH.....411 Providence Bldg.

Correspondence on Marine Engineering, Ship Building and Shipping Subjects Solicited.

Subscription, U. S. and Mexico, $3.00 per annum. Canada, $4.00. Foreign, $4.50. Subscribers can have addresses changed at will.

Change of advertising copy must reach this office on Thursday preceding date of publication.

The Cleveland News Co. will supply the trade with the MARINE REVIEW through the regular channels of the American News Co.

European Agents, The International News Company, Breams Building, Chancery Lane, London, E. C. England.

Entered at the Post Office at Cleveland, Ohio, as Second Class Matter.

July 25, 1907.

STRIKES AND THEIR RESULTS.

Inquiry among the lake ship yards develops a state of affairs calculated to make one pause. At this time last year lake ship yards had booked something like twenty-two orders for vessels for 1907 delivery and other orders followed fast upon them. The year 1907 is more than half gone but there are few orders on the books of lake ship yards for vessels for 1908 delivery. Under normal conditions as many orders would have been placed for next year's business as were placed for this year's. Unfortunately, however, conditions are not normal. The ship building programs that were definitely outlined by the great steel-making companies have been abandoned, owing to unsettled conditions of labor and the consequent inability to guarantee prompt delivery. The steel-making companies are content to get along with what they have, and independent interests are reluctant to order while the future remains so uncertain. If the truth could be got at it would probably be discovered that the ship building companies themselves are glad of the let-up, so harassed and embarrassed have they been by their workmen for months past.

The present demoralization of lake trade is exclusively the work of labor. Candidly there appears to be no reasonable justification for it. The men who struck on the shipping docks violated an agreement which had been entered into between them and the companies at the beginning of the season and which involved a substantial increase in wages. Common justice would require that this contract be observed to the letter, but the men broke it without excuse. Those on the Allouez dock actually formulated their demands after they had struck. This strike has enforced idleness upon train men and has resulted in much hardship and injustice to them. The strike of the miners on the Mesabi range at the instigation of the Western Federation of Miners seems an injudicious move from the new standpoint of strategy on the part of the federation. It does not under present circumstances add seriously to the trouble of the company.

It has been pointed out hitherto in these columns that lake trade, being mainly concerned with iron ore, lies at the base of this country's prosperity. Iron is the king of industry. The phenomenal development of this country during the past few years is to be directly traced to the profusion of ore in the Lake Superior country and the ease and cheapness of its transportation across the chain of lakes to the furnaces of Ohio and Pennsylvania. It is a combination which does not exist elsewhere in the world and it has lifted this country into the premier position among the iron and steel-making nations. If there is a halt placed upon this business it must effect the entire country, and the chief of all sufferers will be the laboring man. In this case labor will be responsible for its own suffering.

RAID ON COASTING LAWS.

The navy department recently chartered some British ships to carry coal from Norfolk to Puget Sound and San Francisco. The reasons advanced for justifying this infringement upon the coastwise laws was that there were no American ships offering for the service and that the naval stations on the Pacific were depleted of coal. It was pointed out at the time that American ships had offered to carry coal to the Pacific coast earlier in the year at a rate that was but slightly in advance of that at which British ships were chartered. Shortly after this action was taken by the navy department an editorial appeared in the New York *Maritime Register* which is interesting as merely showing the direction of the wind. There have been noted from time to time in the past few months certain similar articles in the public prints evidently inspired, presaging a raid upon the coasting law next winter. The article in the New York *Maritime Register* is as follows:

> The chartering of a steamer to take coal from Newcastle, New South Wales to San Francisco marks a new departure in that trade. If this venture proves successful it will undoubtedly be followed by further charters of steamers for the same voyage, in which event it may be possible that in the near future the steamer may supplant the sailing vessel in that trade and by its quicker service help to increase more rapidly the growth of the Australian coal trade with our Pacific coast. The San Francisco coal market is one which our eastern mine owners should largely control, but on account of the lack of available vessels to transport their coal they are placed in the peculiar situation of having to witness an important market for their products supplied by foreign colleries. This condition is, however, one that could not have been foreseen. Voyages from our eastern seaboard to the Pacific coast by way of Cape Horn, except for coal cargoes may be looked upon as a thing of the past. The opening of the Tehuantepec railway has done away with the necessity of sending merchandise by the former route, and the ultimate opening of the Panama canal will no doubt entirely eliminate the Cape Horn route as a commercial highway between our eastern and western seaboard. There is practically no coastwise trade by the way of this route nor any appreciable amount of American tonnage that might be put into this trade. It does not appear under these circumstances that any injury to the American ship owner would result if in this particular branch of the coastwise trade eastern shippers of coal were given the privilege of employing foreign vessels to take forward cargoes. There would be no competition between American and foreign vessels as there are no American vessels engaged at the present time in that trade by way of the Cape Horn route. It seems in this particular case that an exception might be consistently made in regard to the use of foreign vessels by our eastern coal shippers. It, however, lies with congress to grant a privilege of this kind. The effect at the present time of the coastwise laws upon trading by the way of Cape Horn is that shippers are denied the means of getting coal to an important market, which under ordinary conditions would be supplied largely by them.

Coastwise interests are advised to be alert and to see that no further encroachments are made upon the coasting laws. If the national government could only be persuaded to be fair to the American ship there would

Generated on 2024-08-28 14:00 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

be no necessity of chartering foreign tonnage to carry naval stores. There would be plenty of American ships to be had.

STRIKE SITUATION.

Latest advices from the head of the lakes are to the effect that the companies operating the shipping docks will endeavor to resume work on Thursday, if not with the old men, then with new ones, as the companies feel that there is nothing on their part to compromise. Many of the men that struck did so against their personal wishes and therein lies the hope of the situation for they are naturally anxious to be again in receipt of their daily wages.

Since last week when was reported the strike of the dock men at Duluth and Two Harbors, the laborers at the Allouez docks have gone out, quitting very unexpectedly on Thursday, and an attempt has been made to suspend mining operations on the Mesabi range by the Western Federation of Miners. The dock strikers have organized unions during the week, have held several meetings and while perfectly orderly, have emphatically refused to moderate their demands for a 25 cent increase or to consider a compromise of any sort. The railroads are pursuing a uniform policy and while the officials of the Steel Corporation railroads have received representatives of the strikers, nothing was accomplished as the railroads refuse to consider any other proposition than that the men return to work on precisely the same conditions as previously existed. No attempt is being made by either side to force the situation and it is claimed none is contemplated though it is understood that enough men could be obtained to operate the docks. The railroads are not inclined to provoke possible violence by the substitution of new men on the docks and seem content to let the men stay idle till they choose to go to work; so the length of the strike seems to depend on the ability of the laborers to live without an income. Their only available funds amount to about a dollar a man in the treasuries of the newly organized unions which are not allied with any other organization. The men at the Allouez docks quit without notifying the company until afterward what their demands were.

At Duluth not a boat has been loaded since Sunday. A dozen boats are lying in the harbor, light, anchored in the basin or at one of the elevators or coal docks. Several boats loaded with coal have arrived in the last three days and are unloading. At Two Harbors, one boat got away on Thursday, but none has been loaded since, and there are 17 at the docks now. The docks are filled with about 150,000 tons of ore. At Allouez there are also 17 boats. Since the strike was declared, four have been loaded by their crews the ore lying in the dock. They were the W. Davock, the B. Lynam Smith, Australia and the barge Maia. The crews have now been forbidden by the seamen's union, however, from doing this any more. A number of boats left the Duluth-Superior harbor for Ashland where an increased amount of business is being done, though the possible increase there is not large. Marquette and Escanaba are also loading an increased number of boats and the mines are being pushed to an extent that will bring the season total from the old ranges to a point materially above last year's output. The barges and some of the smaller boats of the Pittsburg Steamship Co. fleet are being laid up, as the scarcity of cargoes becomes more pronounced.

The amount of ore shipped during the week from Two Harbors was 168,463 tons and from Allouez 249,561 tons, a total of 418,024 tons, which is a loss compared with the amount that would have been shipped during the week of about 650,000 tons and as compared with the same week last year a loss of 570,913 tons. Owing to the number of boats sent to Allouez after the work was stopped at Duluth and Two Harbors, these docks managed to ship more ore during four days than they did in the entire week last year. The losses at the head of the lakes will be decreased but comparatively little by the increased shipping from lower range ports.

The number of men affected by the dock strike includes 1,700 ore dock laborers, 4,000 open pit laborers and trackmen, 700 shovel men and 830 trainmen on the three railroads, in all 7,230 men. Of these only a part of the 1,700 dock laborers were responsible for the entire tie-up and the enforced idleness, unwillingly brought upon the trainmen and the great majority of the others, has been a great injustice and enough in itself to condemn the action of the dock strikers.

The strike of the miners inaugurated by the Western Federation of Miners can scarcely be said to have complicated the strike situation though it has added to its scope. This trouble has been brewing all summer. At the time the dock men went out, the probable action of the miners was discounted and a policy pursued which would meet that contingency should it arise. Beyond the possibilities of destruction of property as the result of violence the mining of ore is not hindered to much greater degree than with just the docks idle. It has a great seriousness, nevertheless, not the least of which is the fact that many of the good miners who had no desire to quit work are leaving the range in anticipation of a long struggle and their return is problematical.

On Thursday the 18th, the committee representing the miners sent to the Oliver Iron Mining Co. at Duluth the following ultimatum:

"Thomas F. Cole, president,
Oliver Mining Co.,
Duluth, Minn.
Dear Sir:—

I have been instructed to forward and leave with you the enclosed copy of the resolutions adopted at this morning's meeting by the special committee appointed by the Minnesota District Union No. 11, Western Federation of Miners.

The resolutions are plain enough and need no comment of mine. However, I take the liberty to serve a notice on you that, should at any time any of your employes be discharged from work for his connection with our organization, the members of the Western Federation of Miners will at once quit working in and around the mines owned by the company of which you are president.

Yours truly,
Signed—Teofilo Petriella,
Enc. Acting Secretary, M. D. U."

For some unknown reason the strike was directed in the first instance against the Steel Corporation and even yet the independent operators have not been notified of the demands of the miners though efforts have been made at various of their properties by the strikers to force the men who have continued to work to quit. Without waiting however, until July 29 notices were posted at the mines of the Steel Corporation on Saturday ordering the men to quit. Since that time the comparatively large number of miners who did not go out have been intimidated and threatened with the result that many were frightened into quitting.

Where the men have not been threatened the Steel Corporation is still operating its underground mines, putting the ore on stockpile, elsewhere it has closed them entirely and laid off the men. To many of its men who continued after the strike was called it has paid the season bonuses. The mining work in the open pits is entirely suspended except for some stripping work. The stripping operations and underground mines of the independent interests have been inter-

(Continued on page 24.)

Generated on 2024-08-28 14:00 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

CANADIAN GRAIN SHIPMENTS.

The table accompanying this article shows grain shipments out of Port Arthur and Fort William up to June 30, including kinds, quantities, destinations and nationality of ships. Shipments during July have been unusually active. Clearances on several days have been between 600,000 and 1,000,000 bushels, while on many days a fleet capable of moving over 2,000,000 bushels was lying in port loading or waiting to load. With the quantity in store at the lake front and interior elevators, with what is still to be marketed by farmers (estimated to be in the neighborhood of 10,000,000 bushels) there does not appear to be any chance of a let-up in the grain carrying trade this summer. The indications are that the season will be record-breaking in this respect. Freight rates have ruled high from the opening of navigation and are somewhat better today than they were at the opening. The minimum for Georgian Bay is 2 cents; Buffalo, 2½ cents; Kingston, 5⅛ cents, and Montreal, 7 cents. The movement of coal to the Canadian head of the lakes is unprecedented. Both the Canadian Pacific dock at Fort William and the Pittsburg dock at Port Arthur are working to their full capacity. The latter dock is regarded as one of the finest receiving plants on the entire chain of lakes and is doing excellent work in the dispatch of vessels.

The west bound package freight is exceeding all expectations. The three ships of the Canadian Pacific Railway Co., the six of the Northern Navigation Co., six of the Canadian Lake line and seven of the Merchants & Lake Superior line are all filled to their capacity every trip, all of which is an index of prosperity and the wants of the west.

STATEMENT SHOWING SHIPMENTS BY VESSELS FROM FORT WILLIAM AND PORT ARTHUR FROM OPENING OF NAVIGATION, APRIL 29, 1907 (INCLUSIVE) WITH PORTS OF DESTINATION TO JUNE 30, 1907.

		Wheat.	Oats.	Barley.	Flax.
Owen Sound,	Canadian Vessels	582,233.20	1,263,772.02	95,106.22	95,107.18
	Foreign "	.....	.....	.....	.....
Midland,	Canadian "	1,173,000.00	.....	.....	.....
	Foreign "	.....	.....	.....	.....
Tiffin,	Canadian "	205,000.00	.....	.....	.....
	Foreign "	.....	.....	.....	.....
Depot Harbor,	Canadian "	2,071,519.40	476,151.10	122,575.42	.....
	Foreign "	.....	.....	.....	.....
Collingwood,	Canadian "	152,400.00	.....	.....	.....
	Foreign "	.....	.....	.....	.....
Point Edward,	Canadian "	917,166.50	7,000.00	5,000.08	.....
	Foreign "	.....	.....	.....	.....
Meaford,	Canadian "	351,957.40	132,266.06	10,353.06	.....
	Foreign "	.....	.....	.....	.....
Goderich,	Canadian "	1,089,524.50	504,342.00	61,428.00	54.667.26
	Foreign "	.....	.....	.....	.....
Thorold,	Canadian "	59,650.20	.....	.....	.....
	Foreign "	.....	.....	.....	.....
Kingston,	Canadian "	.....	.....	.....	.....
	Foreign "	.....	.....	.....	.....
Prescott,	Canadian "	.....	.....	.....	.....
	Foreign "	.....	.....	.....	.....
Montreal,	Canadian "	4,103,047.50	1,988,011.26	73,873.06	131,635.43
	Foreign "	.....	.....	.....	.....
Port Huron	Canadian "	93,368.10	.....	.....	.....
	Foreign "	314,542.10	.....	.....	.....
Buffalo,	Canadian "	1,045,294.00	.....	.....	.....
	Foreign "	3,902,293.50	969,518.24	38,521.30	.....
Total		16,050,998.40	5,341,062.00	406,858.18	281,410.31
Canadian Vessels		11,834,162.40	4,371,543.10	368,336.36	281,410.31
Foreign Vessels		4,216,836.00	969,518.24	38,521.20	.....

COMPLAINT FROM DREDGERS.

Editor MARINE REVIEW:—The contractors who are removing the shoal at the entrance of Buffalo harbor complain bitterly about the wonderful seamanship shown by some of the captains of the large boats on the lake. These captains, though they have been warned through the papers and by the United States authorities of the presence of this drillboat, and also having good eye-sight, show their remarkable skill by endeavoring to sail so close to the drillboat that they can knock the drills overboard without sinking the drillboat. This may be remarkable seamanship on their part; but it argues a lack of business ability, which renders them unfit for the exalted positions which these great men fill. If most vessels can pass the drillboat perfectly well, there is no reason why a few of them should be so smart. The result of their smartness will be that they will sink the drillboat and cause a loss of property and life.

On Wednesday, July 17, the Yuma ran into the drillboat, breaking an anchor and damaging a drill frame and narrowly escaping sinking the boat. The captain said he had no idea there was such a current there, that carried him down against the drillboat. If there is such a current there, these captains have been coming into Buffalo long enough to know it, and they ought to take the north side of the drillboat as long as it is working on the south side of the shoal.

On the 18th the Tionesta and the Buffalo each struck the drillboat on the same side—the south side—injuring a man in one of these collisions.

Such recklessness is not to be admired; and the assertions that these captains make that they have to strike a certain course, is not borne out by the facts. If the De Graff, which passed immediately after the last two vessels, could take the north side of the dredge and drillboat, there is no reason why the other boats could not have done so.

Of course, if these high and mighty lords of the seas must run into the drillboat, they must understand that they will have to pay the damages.

THE LAKE ERIE DREDGING CO.,
E. P. Hingston,
Gen. Mgr.

Buffalo, July 19.

WHAT SHE THOUGHT.

Editor MARINE REVIEW:—We were sitting up on deck having a little chat one afternoon on one of the lake freighters. There were some passengers promenading the deck. As we were coming into Detroit river the mate shouts "take in the log Ole." The ladies stopped to watch him take in the log. Evidently one of the young ladies thought it was a spoon-hook for she said "Dear me, I think that is a long ways to drag that without having a fish on it."

We had a good little laugh and I thought I would pass it on.

FIRST OILER.

Detroit, July 16.

OLD WRECK CLEARED AWAY.

The United States lake survey has received notice that the United States steamer Hancock, under direction of Col. Chas. E. L. B. Davis, United States engineer at Detroit, has cleared away the old wreck in Lake Huron north of Thunder Bay island lighthouse so as to leave a depth of 24 ft. over it. This wreck, apparently a good-sized schooner or barge, was found during June by the lake survey steamer Search, lying in 30 ft. of water 4⅞ miles N by W ¼ W from Thunder Bay island lighthouse, and had only 19½ ft. of water over it before the removal operations.

Generated on 2024-08-28 14:03 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

QUESTIONS FOR MASTERS AND MATES RESUMED, NO. 38.

Owing to some misunderstanding the questions for masters and mates that have been running in these columns for nearly a year back were dropped prematurely. A correspondent's interest in the matter has caused us to inquire into the matter. The questions, as will be observed on another page, have been resumed and will be continued until the list is complete. It is intended that the list of questions is to cover the navigation course running in the REVIEW. The original plan as advertised will be carried out to the letter. Anyone desiring to enter the contest may do so at any time. A great deal of interest has been taken in these questions and a large number of masters and mates are in the contest to the finish. This is very gratifying. There are also a large number that are following the questions and setting down their answers for a comparison when the answers are published. They are doing this simply for their own benefit not wishing to enter the contest for certain reasons; one being that they do not wish for any publicity in the matter. Those of the contestants who have sent in their answers or a portion of them are certainly up to snuff in their profession, if one has a right to so judge them from their answers, spelling, writing, punctuation, grammatical construction, etc. If all the masters and mates on the lakes could be judged accordingly there would be but very little need for the navigation teacher.

541. What is the principle of the Mercator chart?

542. Wherein does it differ from the actual conditions in nature?

543. How do they allow for the curvature of the earth in the Mercator projection?

544. Is it possible to go from any point on the earth to any other point on the earth by steering one and the same course throughout the entire distance?

545. A ship in taking the rhumb course between points greatly separated from each other does she go direct or in a round-about way?

546. What is meant by middle latitude?

547. What is meant by departure?

548. What is a departure course?

549. What is meant by the dip of the needle?

550. What is the course made good?

QUESTIONS FOR WHEELSMEN AND WATCHMEN.

TENTH INSTALLMENT.

107. Two steamers are approaching each other in an oblique direction, which shall keep clear?

108. Two vessels are pursuing the same course, one overtaking the other, which must keep clear?

109. At what height must the foremast light be on a steam vessel?

110. How much higher must the after light be than the foremast light?

111. How far must these two lights be from each other?

112. How many more points of the horizon should this after light show than the foremast light?

113. Is it compulsory to carry lights in the night time?

114. How long should the lights be kept going?

115. What are the running lights for a steam vessel?

116. What signal shall a vessel at anchor make?

117. You are steering SE when you see the foremast and after light of another steamer and at the same time see the other's red light bearing four points on your starboard bow. You watch this light and the next bearing reveals the fact that you are drawing it more toward your beam; are you getting closer together or farther away?

118. What is a flare-up light, and what is it used for?

ANSWERS TO QUESTIONS FOR WHEELSMEN AND WATCHMEN.

SEVENTH INSTALLMENT PUBLISHED JULY 4.

73. Forward of the beam on the port side.

74. Starboard tack.

75. Two blasts of her horn.

76. The port side.

77. A weather shore. You would run to it to make a lee. The weather shore is the shore from off of which the wind blows if viewed from the sea, but it is the shore upon which the wind blows if viewed from the land.

78. He means that you should turn your steering wheel in such a manner that it will starboard the helm and direct the ship's head to port.

79. Green light gives way to a red light. Memorize this rhyme and you can never forget it: "When to starboard red appears it is your duty to keep clear; but when on your port is seen a steamer with a light of green there is not so much for you to do, the green light must keep clear of you."

80. A vessel is said to have headway when she is moving through the water going ahead.

81. A vessel having way but going astern instead of ahead.

82. A vessel has steerage way when she minds her helm.

83. Put the helm as far as it will go to starboard.

84. N x E ½ E.

A WATCH OFFICER'S DUTY.

I would like to have you answer the following question: "What is the duty or duties of a watch officer upon relieving the man on the bridge; that is, when he assumes command of the ship and of the watch?" What I am trying to get at is what precautionary measures should a watch officer take to insure the safety of the property and lives entrusted to his keeping.

A SUBSCRIBER.

Answer: Upon getting the compass course being steered from the officer relieved he should verify it by asking the wheelsman what he is steering. He should always do this; he should not take it as a matter of fact simply because he was told so. A glance into the standard or navigating binnacle will tell him if the wheelsman is right as well as the officer relieved. It is easy to say W x N for N x W; E x S for S x E, etc. The above procedure leaves no chance for a mistake of this kind, and not only this but it tends to strengthen his confidence in the discharge of his duties. He should next see that the sidelights are burning as well as all the other running lights. He should then determine the true direction of the wind, not the apparent direction but the true direction. This puts him in shape for meeting and keeping clear of sail vessels, and upon seeing either of the colored lights of a sail vessel he will know at a glance which way she is heading and what he must do in order to go clear. It is also to his advantage in case it comes on thick. He should next get the course the ship is steering according to the standard compass. To do this simply have the man at the wheel sing out when he is steady on his course. This gives him the opportunity of watching the steering afterward. He should pay almost as much attention to this compass as the wheelsman does to the steering compass. By so doing he has the opportunity of not only checking the wheelsman if necessary, but if she be a bad steering boat, he knows which way she is or has worked. Also in case the steering compass shifts by reason of an increase or decrease of the ship's magnetism. There are a number of other things that might be mentioned but as these are of the greatest

Generated on 2024-08-28 14:01 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

importance we will let this suffice for the present. It is safe to say that if the foregoing routine were practiced on every boat there would be less strandings and collisions.

STRIKE SITUATION.

(Continued from page 21.)

fered with but little up to today though of course there is no shipping. The strike is to be carried to these mines at once it is claimed but whether it is or not the independent interests will act with the Steel Corporation and conferences have already been held. The Vermillion range has not been affected as yet but the Western Federation has some members all over the Mesabi range.

There are about 25,000 miners on the Mesabi range and of these about 12,000 are now idle. The troublemakers constitute not much more than 10 per cent of the 12,000 and are mostly Finns. During the last two years wages have been twice increased, on January 1, 1907 by 10 per cent. Under the contract system which it is demanded shall be abolished, the better class of miners earn more than they will be able to under the proposed scale.

Of the operating interests the greatest sufferers are the vessel owners and the railroads and the employes of both for every hour of idleness means a direct loss of money. From the mining standpoint conditions demanding the continued output of ore might be a great deal more insistent than they are just now and a delay while by no means desirable will not be critical. Furthermore the strike will afford an opportunity for the companies when rehiring their men to weed out the undesirable element.

IRON SITUATION.

A factor of absorbing importance in the iron and steel industry at the present time is the strike at the head of the lakes and on the iron ore ranges. The present prospects of an immediate settlement are not very promising, and many boats are being laid up at lower lake ports because of inability to find cargoes, and crews are being discharged. A considerable activity in rails for export has developed and has resulted in contracts being closed for 12,000 tons to Japan, 10,000 tons to Australia and 6,000 tons to Mexico respectively. The Transcontinental Railway Commission of Canada has closed for about 45,000 tons from the Dominion Iron & Steel Co. and about 21,000 tons from the Lake Superior Corporation. The dull pig iron situation practically continues, although there is a little better inquiry in some quarters. The contract for plates and shapes for two new vessels has been placed. It is probable that other orders which were cancelled on account of the strike in the ship yards will soon be replaced.

FLORA IN COLLISION.

The passenger steamer Flora, bound from Detroit for Lake Huron ports with 100 passengers aboard, collided with the steel sand sucker John M. McKerchey below Belle Isle last week. The Flora's stem was badly smashed and twisted to starboard. The collision caused a panic among the women passengers. The Flora made for the dock at the foot of Orleans street, where the passengers were transferred to the ferry Lansdowne lying at the dock for repairs. The freight was discharged at the Randolph street dock, tugs meanwhile keeping the Flora afloat by pumping. An examination of the Flora shows that she will require new planking from a point below the waterline to the bulwarks. She is now lying at the dock of the Detroit Ship Building Co., and is kept afloat by a canvas jacket and a big plug of hay and other material stuffed below the surface.

LAUNCHING THE JAY C. MORSE.

The freighter Jay C. Morse, building for the firm of Pickands, Mather & Co. of Cleveland, was launched from the Cleveland yard of the American Ship Building Co. on Saturday last and was christened by Mrs. J. N. Pickands. The new steamer is 552 ft. over all, 532 ft. keel, 58 ft. beam and 31 ft. deep. Her engines will be triple-expansion with cylinders 23, 38 and 63 in. diameters by 42-in. stroke. Steam will be furnished by two Scotch boilers, 14½ ft. diameter by 11½ ft. long, fitted with Ellis & Eaves draft and allowed 180 lbs. pressure. Capt. A. H. Reed will command her and A. A. Marrion will be her chief engineer.

TUG LAUNCHED.

The tug Abner C. Harding, which is the second steel vessel ever constructed on the Chicago river, was launched July 18 at the yard of the Great Lakes Towing Co. Miss Elsie Johnson of Cleveland, daughter of Capt. Thomas Johnson of the Great Lakes Towing Co., christened the tug. The new tug is 95 ft. long and 20 ft. beam and will be stationed at Port Huron.

CONTRACT FOR FREIGHTER.

The Wilson Transit Co. of Cleveland, has closed contract with the American Ship Building Co. for a new steamer to come out during 1908. The new vessel will be a duplicate of the Charles S. Hebard and will be 524 ft. over all, 504 ft. keel, 54 ft. beam and 30 ft. deep, equipped with triple-expansion engines and Scotch boilers.

NEW LIGHTS AT LIME KILN CROSSING.

Owing to the number of lights in use by the contractors on their drills, dredges and so forth, at the Lime Kiln Crossing it has been decided to change the lights of the Lime Kiln Crossing North or upper lightship from the present two white lights to two fixed red lights, one above the other, the upper light to be 15 ft. high above the water and the lower 12 ft. This change will be made and go into effect on Saturday evening, July 27, the reason for this change being to make these lights so distinctive that the masters of down-bound vessels cannot possibly mistake or confuse them with any other lights.

NAVIGATION AT INTERSTATE BRIDGE.

The United States Lake Survey is informed by Maj. Graham D. Fitch, United States Engineer at Duluth, that the south opening of the interstate bridge at Duluth-Superior is now available to navigation. Up-bound vessels must use this opening, and down-bound vessels must pass through the opening provided after the wreck by removal of the raft span; in other words, take the right hand passage. The Reid Wrecking Co. will at times have a barge or scow lying in the south opening alongside the center pier, and this should be carefully avoided. The order prohibiting vessels to pass each other at the bridge is canceled.

SHIP'S LADDER.

The portable fire escape and Jacob's ladder manufactured by the McArthur Portable Fire Escape Co., 1999 Clark avenue, Cleveland, has recently received the fire endorsement of Chief Croker, of the New York fire department. He pronounced it to be one of the best appliances of its kind that he had ever seen. The company is now installing the ladder upon the fleet of the Lehigh Valley Transit Co. of Buffalo. This ladder has unusual adaptability aboard ship. It is always available, is practically indestructable and is far more serviceable than the ordinary rope ladder.

REMOVING CRIB NO. 1.

The United States Lake Survey announces that the Great Lakes Dredge & Dock Co. is now removing the temporary waterworks crib No. 1 at Cleveland, located two miles N by E ¾ E from the main harbor entrance, and expects to complete work by August 10. A bright light on a spar will be maintained within 50 ft. of the northwest corner of the obstruction, and vessels should avoid the immediate vicinity of operations.

Generated on 2024-08-28 14:07 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

OUR COURSE FINDER.

It is with much satisfaction that we are able to announce to our nautical friends and patrons that the MARINE REVIEW COURSE FINDER comes from the press this week, and that orders for the work can now be taken and promptly filled. The Course Finder should be on board of every boat on the lakes and in the possession of every master and mate. The Course Finder takes the place of coast-pilot and sailing direction courses found in so many works. It also takes the place of chart courses, since all chart courses are given in it. It goes one better than all these works by giving the mean correct magnetic courses and correct magnetic bearings of ranges, etc. These mean correct magnetic courses and correct magnetic bearings for the chain of lakes as given in this book are worth alone to any commander the price asked for the volume. This much of the book far exceeds anything of the kind now on the market. This is simply because the work is accurate and the basis of computation is one of accuracy; and too, the work is carried right up to date. This means a whole lot when variation of the compass is to be considered. In addition to all true courses and bearings, variations, correct magnetic bearings, mean variations, and mean correct magnetic courses, all of which have been applied and corrected in a thorough manner, the volume comprises a simple system of obtaining the compass course to be steered by any boat's compass. This portion of the work alone is worth many times more than what we ask for the book. What master or mate is there that can afford to be without such a work as this? The least it can do is to relieve the master of a great deal of responsibility in the shaping of courses. What more difficult task is there on board ship than that of shaping courses? None. Is there anything that a man should be more sure of than the course he is to steer? Does not the safety of the ship depend upon the course steered? Can a man be too careful in such matters? Can he have too much assistance in the shaping of courses? Outside of azimuths (only available in clear weather) what method or methods can a master employ to verify his course? There is none until the MARINE REVIEW Course Finder is placed on the market. The Course Finder has not only got to be seen but it has got to be practically applied, to be fully appreciated. The whole work is based upon correct reasoning, and the most minute details of the work have been carefully considered to insure accuracy. There is no master who is so infallible in his work, and especially in the making of courses, that he does not need a check or a method of verification. The Course Finder will do this for him. As a check on course finding there is nothing to be compared with "Our Course Finder." This work has only to become generally known to become generally used. We are certain of this because the book stands on its own merits.

The price is $2.50 carriage prepaid. The system the work is based upon alone is worth more than $2.50. This is fully explained and proved. For the master, mate, wheelsman, and others, who are trying to understand all about the mysteries of variation and deviation and how to apply them to the courses on the lakes, this work will prove of the greatest help to them. It is so thoroughly practical since all its examples deal with every-day lake practices.

Another good thing about the Course Finder is that it is compact in form, notwithstanding that it contains all the courses and bearings on the chain of lakes, and anything in it is easily found. The index is so arranged that you can turn to any page of the book in a moment's notice. You do not have to wade through a multitude of pages to find what you are looking for. Among our visitors this week were several lake captains, and in viewing the advanced pages of the book all pronounced the work a good thing and just what is needed.

OUR COURSE AND BEARING CORRECTOR.

Owing to the fact that we have been having all kinds of trouble in getting this device perfected, we have not as yet been able to place the instrument on the market. This was no fault of ours but that of the makers. Several firms that undertook the work fell down on it which will account for the delay. An instrument of any kind must be a work of precision to be of account. However correct in principle a tool of this kind may be if its mechanism is not carried out accordingly the accuracy of the principle cannot be demonstrated. This is just the trouble we have been having. The principle was there and the work looked well, but it was not accurate. We could have placed it on the market as it was and taken many orders but we are not doing that kind of business. On the contrary, we cast the whole thing adrift as so much rubbish, and then scoured the country for a house that could handle this class of work. We found a house in New York and we have just received the welcome intelligence that the work is progressing at a very satisfactory rate and that the plates for the printing will be sent on in a few days. Nothing unforseen occurring in the interval, we should have this work on the market in a very short time now. We are sure that this device with its book of explanations and practical examples will meet with the hearty support of the nautical profession generally, and that it will supply a long felt want. Any master armed with this device and our Course Finder will certainly have no excuse in going wrong. The two will work admirably together. Many of the things that are now called the mysteries of navigation will lose their traditions when illustrated on this simple instrument. We will have more to say about the Course Corrector in next issue. Just keep it in mind.

MANY LIVES LOST IN PACIFIC WRECK.

A disastrous collision between the passenger steamship Columbia, owned by the San Francisco & Portland Steamship Co., and the steam schooner San Pedro, owned by the Metropolitan Redwood Lumber Co., Metropolitan, Cal., which occurred off the Mendocino coast July 21 resulted in a great loss of life of those aboard the passenger steamer. She sank in 11 minutes after the collision, most of the passengers being asleep at that time, and it is believed that the loss of life will total 180. The San Pedro, which was kept afloat by her lumber cargo, was able to do but little for the passengers, being equipped with only two life boats. The accident took place in a heavy fog and the captain of the San Pedro is believed to have been off his course. The steamer George W. Elder sighted the survivors at daybreak, taking them aboard, and after scouring the vicinity for any signs of boats or rafts, took the San Pedro in tow and landed at Eureka safely July 22.

The Columbia was an iron screw steamship of 2,722 tons, and was northbound from San Francisco to Portland with a week-end excursion party. The San Pedro, of 500 tons register, was bound from Puget Sound to California ports with her cargo of lumber. The Columbia was built in 1880 at Roach's Ship Yard, Chester, Pa., and the San Pedro was built at Aberdeen, Wash., in 1889.

ALLEGHENY TOTAL LOSS.

The large coastwise steamer Allegheny, of the Merchants & Miners Transportation Co.'s fleet, caught fire while outward bound for Savannah to Philadelphia July 17, and was totally destroyed. All of her passengers and crew were saved but the ship, her cargo and all baggage will be a total loss.

The Allegheny was built at Cramp's, Philadelphia, in 1881 and had a gross tonnage of 2,614; she was 250 ft. long, 38.5 ft. broad, and 16.6 ft. deep.

Generated on 2024-08-28 13:58 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

QUESTIONS ANSWERED.

Editor MARINE REVIEW:—Saw in your paper of June 20 an illustration of how to find how far apart two steamers are after each running 100 miles starting from the same point, one steering N, the other N x E, and as you say that this rule does not apply to more than one point. How would you find the correct distance they would be apart if their courses were more than a point difference? Hoping to see the answer in an issue of the RVEIEW in the near future, I remain,

A SUBSCRIBER (A MATE.)

P. S.—And also would like to more thoroughly understand the problem in regard to Twin River Pt. light on page 20 of the same Issue. Also the cross bearing and how to work that out.

Sault Ste. Marie, July 8.

Answer:—When the course is over a point the problem must be worked in trigonometry, using the logarithmic functions which are contained in all navigational tables. The problem comes under oblique-angled trigonometry. A diagram drawn to represent problems of this nature forms what is technically known as an isosceles triangle, and that is a triangle having two of its sides equal. A four-point bearing forms an isosceles triangle, since two of its sides (opposite) and two of its angles (opposite) are equal.

We will take an example: Say two boats start from the same place, one steering N 100 miles and the other NE x N 100 miles, how far apart will they be after each running 100 miles? Draw a rough plan or diagram showing the course and distance of each; next connect the two course lines with a straight line. This last line represents the distance at which the two steamers are apart. Call the starting point A and the two ends B and C. Mark A as angle 3-points, because the two courses make an angle of 3 points; then the other two angles will each be 6½ points. This is because the three angles of every triangle equal 180 degrees, and 180 degrees is the same thing as 16 points. If one angle is 3 points the other two must equal 13 points together, hence, one of them must equal 6½ points. Then say: As the sine of angle 6½-pts. is to either side of 100 miles so is the sine of angle 3-pts. to the side BC; or worked out in full it would stand thus:

As sine of angle 6½-pts.....9.98088
Is to either side 100 miles 2.00000
So is the sine 3-pts 9.74474

11.74474
..... 9.98088

To the side BC 58.06 miles.....1.76386

The distance apart would be 58.06 miles. The above operation is simple proportion in logarithms. The second and third terms multiplied and divided by the first term to get the fourth term which is the answer. In logarithms adding makes multiplication and subtracting performs division.

Another good way and one that is more simple, is to do it by construction. Lay off on a chart or with a protractor on a sheet of paper an angle of 3 points, draw the two lines representing the course; use a scale of equal parts divided to tenths, using one inch to 10 miles. Connect the two ends and measure the length of your line, and this will be the required distance. We will have more to say on this subject another time.

A Cross Bearing is two bearings of two objects taken at the same time. These lines are drawn on the chart from the objects observed and where the two lines cross or intersect each other is the position of the ship at the time the bearings were taken. For example: Supposing at the same time that Twin River Pt. lighthouse bore SW x S Kewaunee pierhead light bore NW. Draw a line SW x S and NE x N over Twin River Pt. light and extend it out for some distance; draw another line NW and SE from Kewaunee light and where the two lines intersect is the position of the ship provided she took these bearings as above described. The ship will be 9 miles from Kewaunee and 13¼ miles from Twin River Pt.

If there is anything more that you would like to have answered more fully on this subject or anything that you do not thoroughly understand let us hear from you again and as many times as you like. This is what this department is for.

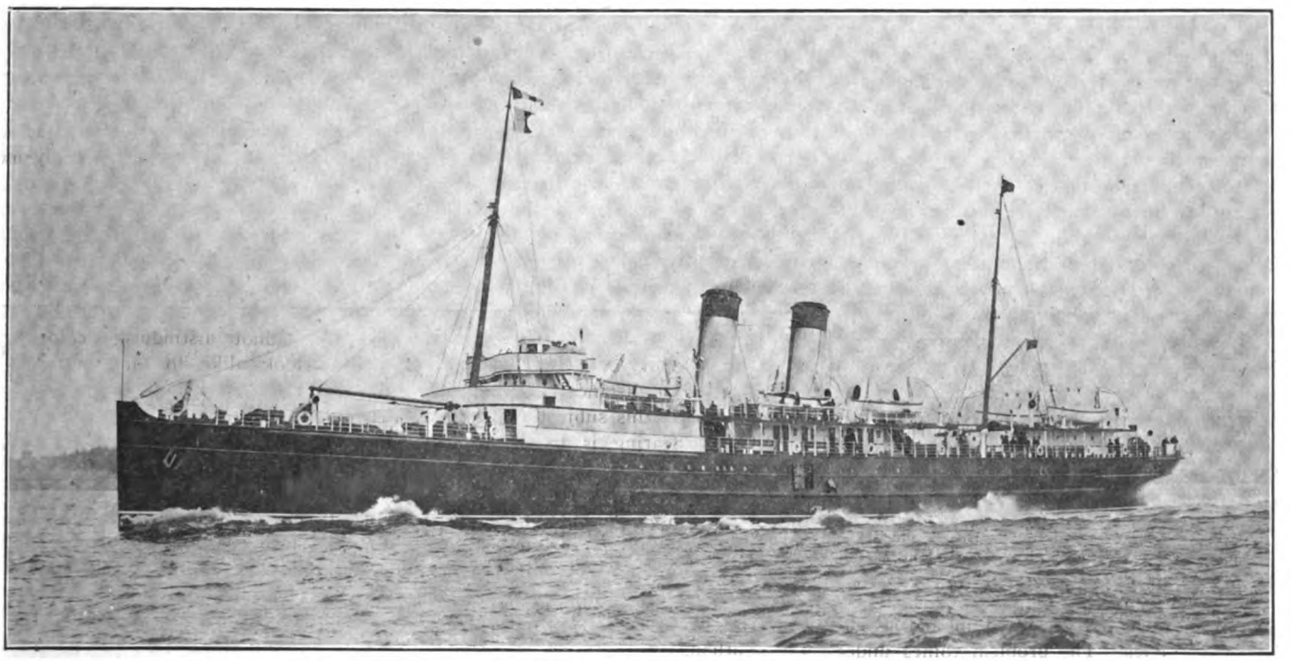
A FEW HINTS FOR THE YOUNG MAN ABOARD SHIP.

Study the theory of your calling and you will find that its practice will come to you much quicker than the practice would without its theory. The theory of navigation is learned from books. You must have the theory before you can practice it. Theory put to practice is what makes a navigator. You cannot learn seamanship from books to very good advantage, but you can get a whole lot of hints that will help along your practice. Know the wherefore as well as the how is the idea nowadays. What it has taken some men years to accomplish through working by practice alone a man with the theory can learn it in much less time and know it better. His practice will be much better to him because he knows the reasons it is based upon.

When a young man makes up his mind to make navigation his profession one of the first things he should do is find out whether he can pass the examination for color-blindness, for if he cannot, the time he spends in preparing himself for his first certificate and in getting used to sea life will be worse than wasted, for it can only lead to the bitterest disappointment. The writer knows a number of such cases and there are many more. Hence, the necessity for preliminary assurance as to the power of distinguishing colors. Any ship's officer can give you a simple examination that will disclose whether or not you are color blind. It must be remembered that a color-blind person cannot distinguish colors; all colors look alike to him. Others will call red green and blue red, etc.

The "rules of the road," as the law which regulates the movements of vessels when underway, is called, is one of the most important parts of a young officer's first examination. He should know this better than any other part of his work, if one part of his work should be any better than another. He should not only memorize each rule, but he should know the law or reason that the rule is based upon. This is not difficult to learn. The law is really based upon the port and starboard helm; the red and green light, and one and two blasts of the steam whistle. Starboard helm, green light and one whistle are practically all one and the same thing. And similarly, port helm, red light and two blasts of the big whistle are all one and the same. These rules should not be learned parrot-fashion as is too often the case. Simply knowing these rules is of no account and unless they can be practically applied they are worse than useless to a man. It is one thing to know a thing and another thing to carry into execution what you know. This is the way it is with the rules of the road. You may know each one by heart, but if you cannot execute it on board you are hopelessly out of place, and a detriment to your calling. A young officer generally has some such experience when he first takes charge of the deck. It is the great responsibilities resting upon him that unnerves him. But this soon wears away when he has a little practice. The wheelsman or watchman has the opportunity of fitting himself admirably for this position long before it comes to him if he will only exercise a little judgment and discretion in the matter. After learning the rules of the road he should practice them in this way: Watch every move that is made on your boat and by the watch officer. In meeting and passing other vessels before the required signals are blown, say to yourself what you would do under like circumstances. What the watch officer does is what you should do. In case your judgment is different than his, inquire into the matter and find your mistake or his mistake, as might prove the case. You

Generated on 2024-08-28 14:01 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN



THE VICTORIA, THE LATEST CROSS-CHANNEL TURBINE-DRIVEN STEAMER.

will be surprised how quickly you will get on to the ropes and how easily such a knowledge comes to one. You will find it to the greatest advantage the first time you are left in charge of the deck. These are only simple things, but they are worth knowing, and what is worth knowing at all is worth knowing well.

MARINE PATENTS.

857,766. Boat for Ice Breaking and other Purposes. Conrad Stangebye, San Francisco, Cal.

857,773. Floating Tidal Water Wheel. John Tibbitts, Walsall, and Alfred W. Turner, Birmingham, Eng.

857,868. Means for Propelling Boats. William G. Busse, Brooklyn, N. Y.

857,951. Water Conveyance. William M. Meacham, and Larned E. Meacham, Chicago, Ill.

858,010. Propeller for Boats. Charles A. Moline, Bancroft, Iowa.

858,180. Loading-Barge for Vessels. Frederic V. Hetzel, Philadelphia, Pa., assignor to Link-Belt Co., Chicago, Ill,

858,215. Marine Propeller. Oscar D. Robinson, and Rollo L. Bennett, Olivet, Mich.

858,266. Automobile Torpedo. Gregory C. Davison, U. S. Navy.

859,582. Folding Boat. Albert J. Rosin, Cleveland, Ohio.

859,693. Ice and Water Boat. Nathaniel Roe, Patchogue, N. Y.

856,115. Marine Propulsion. Yasuzo Wadagaki, Sasebo, Japan.

857,193. Life Saving Apparatus for Submarine Boats. Oscar A. C. Oehmler, Washington, D. C., assignor of one-third to William Frederick Gude and Adolphus Gude, Washington, D. C.

857,264. Device for Transporting Ships. Earl C. West and Albert F. Wolther, Brownton, Minn.

856,317. Lines for Vessels. Theodore R. Timby, Brooklyn, N. Y.

857,478. Vessel. John McArdle, San Francisco, Cal.

PERSONAL.

Thomas Britt has been appointed acting general fuel agent of the Canadian Pacific railway with office at Montreal.

A. D. Mactier has been appointed assistant to the vice president of the Canadian Pacific Railway Co. with office at Montreal.

J. V. O'Donahoe has been appointed manager's assistant by the Richelieu & Ontario Navigation Co. with offices at Montreal.

Capt. Uberroth, who has been connected with the Milwaukee station of the revenue cutter service as lieutenant of the cutter Morrell under Capt. Davis has been appointed to the command of the cutter Tuscarora, succeeding Capt. Thomas D. Walker, who retires from active service.

Robert W. Hunt & Co., general offices, 1121 Rookery building, Chicago, have been given the inspection of the material for the Southern Pacific Co.'s rifled pipe line. This embraces 256 miles of 8-in. rifled pipe, which is being manufactured at the Lorain plant of the National Tube Co., and the machinery for twenty-four pumping stations, covering forty-six duplicate pumps to be manufactured by the Janesville Iron Works, Hazleton, Pa., and seventy-two boilers to be furnished by the Edgemoor Iron Co., Edgemoor, Del.

TRADE NOTES.

Lynn Bros. of Port Huron, Mich., have been appointed as sales agent of the Welin Quadrant Davit and the Mills Releasing Gear for the great lakes.

The Republic Belting & Supply Co., of Cleveland have recently made business connections with large distributing houses in Buenos Ayres, South America, and Yokohama, Japan. It has opened jobbing accounts in Spokane, Wash., Denver, Colo., and Nashville, Tenn.

The Atlantic Works, Incorporated, 28th street and Gray's Ferry Road, Philadelphia, Pa., have recently received an order from the government for one of their heavy timber planers to work on four sides 18 in. by 14 in., and on two sides 28 in. by 14 in.; one heavy dimension planer to work 30 in. wide, up to 24 in. in thickness and 60 ft. long; one large flooring machine and one saw sharpening machine for blades 8 in. wide and over. These machines are to be used at the League Island Navy Yard at Philadelphia.

Generated on 2024-08-28 13:59 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

DEFECTS OF OUR BATTLESHIPS.

In its issue for July *The Navy* renews its attack upon the battleships of our navy, of which it further says in the extracts from a long article which follow:

"It has been asserted that the ships of the Iowa and Oregon class were up to the best conception of the time when they were designed, and the same assertion has been charitably extended to cover the designs of the Kearsarge and Kentucky. Now, in our comment on these ships, we based our observations in the first place upon the fact that the current edition of Brassey's Annual has given the United States the second rank among naval powers upon the basis of the possession of twenty-two first-class battleships, which included those of the Iowa class and up. And we pointed out that these ships were not first-class battleships, because they had soft ends. We might add that they have a low freeboard, low speed, and that according to the pretensions of the navy department they were never intended to be anything but coast defense battleships; not sea-going fighting ships.

"The large turret guns of these two ships are built with very thick chases; they are mounted on trunnions placed so far from the turret wall that it was necessary to cut a great hole in the turret wall so as to allow for the required elevation and depression of the gun; and the gun itself—that is, the mechanism of the gun outside of the shot carrying bore—was so constructed as to expose the whole affair to instant wrecking by so small a projectile as that from a one-pounder rapid-fire gun.

"If the Kearsarge and Kentucky had been designed according to the best ideas of practice current at that time, it seems hardly likely that the officers who took them to Europe soon after completion would have been grossly ashamed of the ships of which they had command; but, alas! they were ashamed. When they got over to Europe, these officers discovered that European contractors had perceived the obvious, and had constructed their turret guns with trunnions close to the wall of the turret, and with the smallest possible openings in the turret armor, so that their arrangements should not invite the instant wrecking of their biggest guns. It may be imagined that the people aboard the Kearsarge and Kentucky—and for the benefit of our heretic-hunting critics we will add that our information does not come from the officers who commanded those ships at that time—were considerably humiliated by the evident fact that the navy department of the United States had sent abroad, as examples of its newest and most efficient warship construction, ships that were far behind the productions of foreign naval architects. With a zeal which may have been misplaced, but was at least sincere, the officers aboard these ships took pains to conceal the backwardness of our naval construction. They secured various pieces of wood and they built around their turret guns, inside the turret armor, certain shields which obstructed the view from the outside into the interior of the turrets, and which, when painted a judicious gray, were easily mistaken for turret shutters of steel. This is the way and the measure in which the Kearsarge and Kentucky were built 'up to the best conceptions of the naval architects of that day.'

"The bureau of construction and repair, the bureau of ordnance, and the bureau of steam engineering appear to be jointly responsible for the designs adopted for Nos. 28 and 29; the results of their co-operation furnish one more of almost innumerable instances of the unfortunate results of the existing system of bureau administration of the navy department. The bureau of ordnance, under Rear Admiral Mason, has been energetic, progressive, and almost wholly praiseworthy in everything that relates to ordnance. In so far, however, as it is responsible for the waterline armor belt of Nos. 28 and 29, it has done ill. These new ships, like their predecessors, will be designed to develop their maximum speed under conditions of loading which will leave from two-fifths to a half of the waterline belt above water. Trial speed is obtained when the ship, outside her own permanent structure, has rather less than half the weights aboard, in the way of coal, water, ammunition, food supplies, and crew, that she will have ever after. As soon as the ship goes into commission, she takes on many tons of additional load. The results of this addition of weights are two: first, the waterline belt is pushed so far down into the water that it becomes practically an under water strip of armor; second, the ship sets so much deeper in the water that she is slower than her maximum speed by an amount averaging about one and one-half knots. That is, an eighteen-knot battleship, when fully loaded with supplies and comforts for her crew, can rarely make seventeen knots at top speed, and is usually considered slower. The system enforced by the bureaus means, therefore, not only that our battleships do not have the waterline protection credited to them by the official reports, but that when they are in fighting trim they do not have the speed they are officially declared to have."

Concerning the criticism, a dispatch from Washington read as follows:

"The prevailing opinion among officers of the bureaus of construction and ordnance is that the criticism represents the opinion of a minority of naval officers whose opinions have not found favor officially and who see only their side of the question."

It is not of the smallest consequence who or what prompts the criticism; the sole question to be considered is whether it is sound or not. As to this Admiral Brownson says:

"That there were defects in the Oregon class and the Kentucky and Kearsarge is well known; in fact, these defects were discovered before the completion of those ships, but the wonder is that there were so few defects, considering that they were the first heavy battleships built in this country. Compared to the battleships of other nations, designed and built at the same time, the Oregon class was conspicuously superior.

"It is true that their armor was badly placed, but that arose from the addition to the ships of a great amount of material and stores and machinery not included in the original design. It is also true that they lack balanced turrets, but when they were built there were no such turrets in any navy. Their eight-inch ammunition tubes also were not sufficiently protected.

"As to the criticisms directed at the large size of the ports in the turrets, this has been corrected in later designs by bringing the trunnions of the guns nearer to the front of the turret, so that battleships of later design are free from this defect. As to gun platforms, which is the main purpose of the ship, the Oregon class has no superior, and even at this late day they would give a good account of themselves in action."

FINDINGS ON GEORGIA DISASTER.

By a process of elimination the naval board, which has been investigating the accident whereby the men in the turret of the battleship Georgia lost their lives, has arrived at the conclusion that a "delayed flare back" caused this catastrophe. In one sense the verdict is received with a distinct sense of relief by naval officers, because it shows that they had no new element of danger to contend with. They had experienced "flare backs" before and thought that they knew how to deal with them.

A "delayed flare back" is caused by closing off too soon the blast of compressed air, which is supposed to expel from the bore of the gun the unburnt gases and fragments of smoldering powder covering what might be left from the last discharge. After the terrible accident in the Missouri's turret,

Generated on 2024-08-28 13:59 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

three years ago, resulting in the loss of over thirty lives, the experts having decided that that accident was caused by the ignition of the new charge by the unburnt gases and smoldering cartridge cloth of the preceding charge, the ordnance bureau caused to be fitted to the breech of each of the great guns an air blast apparatus calculated to expel by compressed air any gas or cloth that might remain in the bore of the gun. So far this has worked well, and there have been no "flare backs" since the device was installed.

NAVIGATION CONFERENCE COMMITTEE MEETS.

The committee which was appointed by the Navigation Conference in April last held a meeting recently in New York to consider the matters referred to it and to make plans for carrying the action of the conference into effect. Lewis Nixon, chairman of the committee, presided.

Among the subjects considered were the questions of licensing the masters of sailing vessels and the requirement of the use of appliances for the rapid launching of life boats. Resolutions on these two important subjects were passed as follows:

"Resolved, That the government should take such measures as may, in its judgment, seem proper to license the masters of sailing vessels of three hundred tons and over, such license to be based upon an examination as to knowledge of the rules of the road and good character, but licenses should be issued without examination to masters of good character who have had five years' experience in sailing vessels.

"Resolved, That it be the sense of this committee that the department of navigation consider the advisability of compelling all vessels carrying passengers which in the judgment of inspector or under existing laws are equipped with life boats shall be provided with modern appliances for quickly launching them, such as are now required of sea-going vessels."

ACCIDENT TO KAISER WILHELM II.

The North German Lloyd steamship Kaiser Wilhelm II while loading coal at Bremerhaven July 20, suddenly listed and the water poured into her bunkers and boiler compartments through the open coal ports causing the vessel to careen and lie on her side on the bottom. The accident is explained on the basis that the inspectors of the coal stowing had not noticed that the vessel was not properly trimmed because, being partially aground, she kept her equilibrium. When, however, she began to refloat with the rising tide she suddenly went over on her side. The water has been entirely pumped out and it is announced that aside from the cleaning which will be necessary, the vessel will not require any repairs. Several days will elapse before the ship can sail however and meantime her passengers are being portioned out to other lines so far as is possible with the present crowded state of traffic.

DULUTH GRAIN SHIPMENTS.

Duluth, July 24—The great amount of tonnage available has brought about a large drop in the grain rate, cargoes having been shipped from the head of the lakes for a cent and a little over. The shipments of wheat and flax increased though the load of 400,000 bushels of flax taken by the D. R. Hanna is not included in the figures below. There are still in Duluth over 4,000,000 bus. of wheat and about 2,000,000 bus. of flax. The stocks of other grains are very low. The figures showing the receipts and shipments for the week are as follows:

WEEK ENDING JULY 20.

	Receipts.	Shipments.
Wheat	714,451	1,014,072
Corn	4,337	25,000
Oats	98,296	129,329
Rye	12,142	29,422
Barley	93,490	219,870
Flax	240,715	561,377

The load of the Hanna of 400,000 bus. taken on at the Great Northern Elevator "S" was loaded in the quick time of seven hours.

INTERESTING FEAT

San Francisco, July 22.—The passenger steamer Manchuria, of the Pacific Mail Steamship Co., has just been launched from the Union Iron Works dry dock where she has been undergoing extensive repairs. The Manchuria ran ashore on the Island of Oahu, one of the Hawaiian group, on Aug. 20, 1906, where she held fast until successfully floated, though in a very damaged condition, on Sept. 18, 1906. The vessel was subsequently brought to San Francisco and turned over to the Union Iron Works, Dec. 17, 1906, to be repaired. Unquestionably this was one of the largest ship repair jobs ever made in this country. During her captivity in dry dock, 257 shell plates, 22 keel plates, 355 frame angle bars, 266 floor plates and 609 intercostal plates had to be removed and renewed. This practically meant that the entire bottom of the ship was taken out. In doing this the greatest care was necessary to properly shore the ship in her weakened condition to prevent straining. About 1,500 shores, 12 inches by 12 inches, were used for this purpose. The repairs called for the continuous services of the 600 to 700 workmen during a period of over five months.

The river and steam transportation interests of Sacramento have reached an understanding to build a steel bridge across the Sacramento river at the foot of M street, which will be open to car-wagon traffic and to pedestrians.

RECHRISTENING SNAG BOAT.

The order which was issued by Secretary of War Taft some months ago providing that no steamboat, public building, park, roadway or public reservation should be named after any living officer of the army or navy or any living official of the government has led to the renaming of three boats now in the possession of the engineer department of the United States army. These are the Mississippi snag-puller Col. Mackenzie, the Major Mackenzie, now engaged in government work on the Mississippi with headquarters at Keokuk, and the dredge boat General Mackenzie, located at Cape May, N. J. These three boats were named after the present head of the engineering corps, Brig. Gen. Alexander Mackenzie, having been built while he was occupying successive ranks and named after him. The president and the inland waterways commission are to make a trip on the Mississippi snag-puller while on their tour of inspection this fall and the boat will by that time be under a new name, which has not yet been announced.

MAGNOLIA TO BLAME.

The United States lighthouse tender Magnolia, upon which President Roosevelt was a passenger, and not the fruit steamer Esparta, was at fault in the collision between these boats in the Mississippi river, Oct. 26, 1905, according to a decision made by Judge E. D. Saunders, in the United States district court at New Orleans recently. In dismissing a suit for $25,000 brought by the government against the fruit ship, Judge Saunders held that the evidence taken in the case by a United States commissioner, showed the lighthouse tender to be at fault. The accident occurred when President Roosevelt took his southern trip in the autumn of 1905.

ALLAN LINER CORSICAN.

The new steamer Corsican, the latest addition to the Allan Line, reached Montreal from Liverpool last week. The Corsican is an extremely graceful boat and reminds Canadians of the old Parisian which for many years was the most popular boat trading on the St. Lawrence route. The Corsican was not pushed on her maiden trip but is expected to reduce the passage by sixteen hours. She was built by Barclay, Currie & Co. on the Clyde and is 516 ft. long, 61¼ ft. wide. Her engines are triple expansion.

Generated on 2024-08-28 13:58 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

COMPASSES ON LAKE STEAMERS.

BY CLARENCE E. LONG

The chief difficulty the lake master has in the use of his compass is in finding and allowing for the changes in the deviation that take place from the various trims of his boat, such as when either loaded or light, water bottoms filled or empty. This is owing to the fact that the forces of the ship's magnetism change their lines of direction on the compass needle at every such change of the hull in the water. A simple example will illustrate this: Suppose the ship's magnetism to be in the fore-and-aft line of the hull with its plane below the deck. See Figs. 1 and 2. Fig. 1 shows the boat loaded and Fig. 2 the same boat in light trim. Now in both cases the line or plane of the ship's magnetism remains the same, that is, the magnetic poles of same will remain in the same part of the hull in either position. When the boat is light her bow rises high in the air, and the line of the ship's magnetism rises with it, and the direction of its lines of force undergo a corresponding change. Although the magnetic field of the ship's magnetism encompasses the same extent in both cases, the field has shifted its position, and the force that acted on the compass needle in the one case is altogether different in the second case. It must be borne in mind that the compass, as it hangs in its gimbals is always on an even keel no matter what position the ship's hull is in. When the ship is loaded and about on an even keel the card of the compass and the keel are about parallel with each other; but when the ship is light the compass card and keel are no longer parallel. A careful study of Figs. 1 and 2 will make this all very plain.

Owing to this peculiarity of lake steamers (bows high out of the water when light) all courses steered or to be steered must be checked by frequent azimuths and river and harbor ranges, etc. Azimuths offer the best means of setting the course, but when the sky is overcast they are of no account and other means must be made to supply this deficiency. Harbor and river ranges must take the place of the azimuth. These ranges should be used anyway as a check on the azimuths.

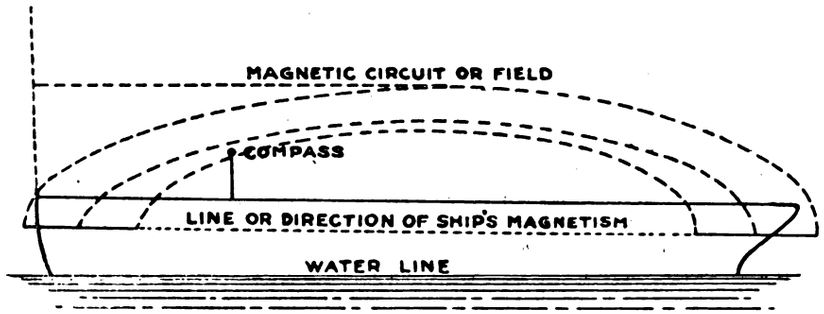


FIG. 1.—VESSEL LOADED—ON AN EVEN KEEL NEARLY.

The deviation curve offers the greatest facility in this work, both in finding the deviation from azimuths and from ranges. The practice now prevails in setting the course by an azimuth each time the course is shifted. This answers very well so long as the sun is out, but when the sun cannot be observed he must rely on harbor ranges. Coming out of piers, etc., does not afford the facility for finding the deviation as does a good range ahead, and the deviation as found in the former cases is not always to be relied upon. Where the ship's head can be put on a mark ahead and steadied for some time the result is more reliable and consequently more satisfactory, than where one has to line up parallel with a pier or cut, as is oftentimes the case.

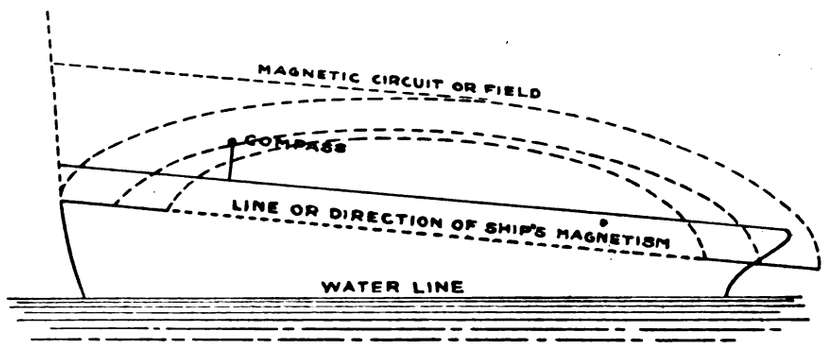


FIG. 2.—VESSEL LIGHT—BOW HIGH UP.

Drawing the deviation to a curve the deviations necessary for same are only required on a few equidistant points of the compass. This is the beauty of the deviation curve, you only need to know the deviation on two points, say four points separated, to find the deviation for the points lying between them. Using a table of deviation it is necessary to find the actual deviation on every full point. If, while the master is setting his course by an azimuth, he would swing his boat and steady her on the cardinal and intercardinal points, he could, by means of the curve ascertain the deviation and compass courses for any other point of the compass with perfect ease and accuracy. For an example: Suppose the case of a steamer bound from Duluth to some Lake Erie port. Instead of only setting the course to Devil's island by an azimuth, the deviation on NE, E, SE, S and SW was ascertained and then the same set of azimuths used to set the Devil's island course, the master would then have in his possession sufficient data to make the proper allowance for all the courses he will need to steer to his destination. He can draw his deviation curve at any time before arriving at the Soo. The ranges in the Soo river afford him another means of verifying the deviation found by the azimuths. Every course should be checked by an azimuth when the opportunity is offered. Supposing the case where no azimuth could be taken to set the course, then the pier range must be utilized in the best possible manner, also the courses steered on previous courses, or the course that agreed for the ship in her present trim. As soon as the sun is available azimuths should be taken. Verify or check your course first and then swing your boat on those points of the compass that you will need the deviation for to make courses for your destination. To draw it to a curve the deviation for the nearest cardinal and intercardinal points is all that is necessary. Any other point will do just as well so long as they are about equally distant from each other. Such curves can be easily constructed without loss of time and with but little effort. The numerous ranges in the rivers and cuts and the correct variation of the locality as

Generated on 2024-08-28 14:01 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

taken from the chart, gives the master the means of obtaining the deviations required for the curve.

Our subscribers in practical lake service can practice, prove and establish the correctness of the various statements given in the foregoing by working the following practical problems taken from some of the ranges in the Soo river. Just try these and see what a simple thing it is to find the deviation; it will help you to understand other problems of the deviation of the compass which are more difficult. Be sure to allow for the variation of the compass. Make a record of the deviation on these various headings and write them in the log-book, and then the next course you desire to make good, first find the true course from the chart; second, find the variation (which you get from the chart) at departure and the variation at destination, add them together and divide by 2. This half sum is the mean variation between the ends of the course to be sailed, and should be applied to the true course to obtain the correct magnetic course. Next find from the record of the deviations the amount of the deviation for this correct magnetic course, and apply it to this correct magnetic course to get the compass course. Now steer this course and see what a nice hit you will make of it. You will not be steering by guess nor by God, and you will be surprised at its simplicity, and, too, when the shipmaster once understands the theory and practice of this deviation problem and sees its effect on the compass his respect and confidence in this valuable instrument will be vastly increased.

The following problems will explain the foregoing statements:

Frying Pan and Pipe Islands lighthouses in range—true bearing N ⅜ W, Var. 4¼° Wly = ⅜-pt., making the correct magnetic bearing of the range to be north. When your vessel's head is brought in one with these lighthouses and there is no deviation the compass will show the same reading as that of the correct magnetic bearing of the range, which in this case is north.

Supposing that when the vessel's head is brought in range with the lighthouses and "she is steady on the course," the compass reads something east of north, say N ½ E, what is the amount and name of the deviation, that is, which way is the compass card pulled by the attraction? It must be pulled ½-pt. to the left (Wly.) deviation), because N ½ E is where north ought to be.

Now prove this by the various rules stated: 1st. To name the deviation: If the correct magnetic bearing is to the left of the compass bearing the deviation is westerly. North in this case is the correct magnetic bearing and N ½ E is the compass bearing, since it is the reading shown by the compass. Now, it is easily to be seen that north is to the left of N ½ E by the amount of ½-pt. Hence we have established the fact that there is ½-pt. Wly. deviation when heading north by our compass and to steer correct magnetic north at any place we must steer N ½ E by compass. Remember, that it is not the true course but the correct magnetic course, the true course corrected for variation.

2d. To find the correct magnetic bearing when the compass bearing is given, allow Wly. Dev. to the left of the compass bearing. In this case the compass bearing is N ½ E, Dev. ½-pt. Wly. and ½-pt. to the left of N ½ E is north, which is another proof.

3d. To find the compass course from the correct magnetic course, allow Wly. Dev. to the right of the correct magnetic course to obtain the compass course; hence, ½-pt. to the right of north is N ½ E.

Now, supposing that when the vessel's head is in range with the lighthouses the compass reads to the west of north, say N ¾ W what is the amount and name of the Deviation? Ans. ¾-pt. Ely., the compass card being pulled to the right of its proper position, or it must have swung to the right in order to bring N ¾ W where north ought to be; or when the correct magnetic bearing (north in this case) is to the right of the compass bearing (N ¾ W in this case) the Dev. is Ely. From correct magnetic to compass allow Ely. Dev. to the right of the compass course or bearing; hence ¾-pt. to the right of N ¾ W, the compass course, is north, the correct magnetic course. Remember, that if the compass reading is to the right of what you know the correct magnetic bearing to be the Dev. is Ely. by the amount of the difference between the correct magnetic and compass bearings; and when the compass reading is to the left of the correct magnetic bearing the Dev. is Wly. by the amount of this difference.

Bear in mind that Right and Easterly have one and the same meaning with reference to the compass card, and that Left and Westerly are the same.

Winter Pt. Range with Mud Lake Beacon, true bearing NW ⅜ W, Var. 4° Wly = ⅜-pt.; making the correct magnetic bearing to be NW. In other words if your compass was correct on NW it would say so when you were heading directly on them. If, when on with this range the compass shows anything north of NW the Dev. is Wly. by the amount of this difference; if anything west of NW the Dev. is Ely.

Remember, that when you have once found the deviation for any course it is good for that course at all times afterwards, provided however, that there was nothing in the cargo that would influence the needle, nor that the ship's magnetism had not changed its lines of force, in relation to the compass needle from either being loaded or light or otherwise. The deviation found will be for that particular trim of the boat, so that it becomes necessary to have at least two curves, one for when loaded and other for when light.

Harwood Pt. range will give you the same thing as Frying Pan and Pipe Islands. The true bearing of Harwood range is N 3½° W, Var. 4° Wly = ⅜-pt., nearly, making the correct magnetic bearing north. This is an excellent position to get the deviation on north, and also for adjusting the compass for this direction, since you can get the Dark Hole range over stern and be doubly sure of heading accurately.

Vidal Shoal Channel Range (Soo Canal Ranges) over stern, the true bearing of which is WSW ¾ W (W by S ¼ S), Var. 2½° Wly. = ¼-pt., making the correct magnetic bearing of the range to be W by S. With this range directly over stern the compass should read W by S if there is no deviation. If it should read west of W by S the Dev. is Wly; if south of W by S the Dev. is Ely., the amount depending on the difference of what the compass shows and W by S.

Pt. au Pins Range, true bearing of which is SW ¾ W, Var. 2½° Wly. = ¼-pt., which makes the correct magnetic bearing SW by W. If your compass reads anything to the west of SW by W the deviation is westerly; if south of SW by W, it is easterly. If the compass should read SW by W itself there is no deviation and the compass bearing is also the correct magnetic bearing.

We have now found the deviation on the following correct magnetic points: North, NW, W by S and SW x W. Turn the deviation corresponding to these points, which is expressed in fractional points, into degrees. For example, supposing that for North you found the Dev. to be ⅜ of a point westerly. This would be equal to 4°. Now, from the deviation on the four points thus found we can find the deviation on any point between these points by the use of Baxter's Compass Diagram. Take the number of degrees of the deviation and lay them off on the horizontal line of the diagram abreast of the compass point for which it was found, and mark it with a dot or small circle. Easterly deviations to the right of the "magnetic line," and westerly deviation to the left of this magnetic line, which represents the zero or starting point, also the line of no deviation. For example, on North the deviation, we will say, is

Generated on 2024-08-28 14:01 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

4° Wly. Find north on the left hand margin of diagram and follow the horizontal line coinciding with it to the magnetic line. From this magnetic line count 4 degree spaces or squares to the left of the magnetic line because the deviation is westerly, and make a dot.

On NW we will say, for example, that the deviation as found from our range is 7° Wly. Find the horizontal line on the diagram coinciding with the compass point NW and beginning from the magnetic line count 7 degree spaces to the left and make a dot. On W by S we will say that the deviation as found from our range is 3° Ely. Find the horizontal line coinciding with the point W by S on the card and follow it out to the magnetic line, and from the magnetic line count three degree spaces to the right of the magnetic line on account of the deviation being easterly instead of westerly, and make a dot. On SW x W the deviation as found from the range is, we will say, 6° Ely. Find SW x W on the card and run out on the horizontal line coinciding with it till the magnetic line is reached. Then from the magnetic line on the same horizontal line count 6° spaces to the right of the magnetic line and make a dot. Now draw a smooth curve through all the dots. This line represents the deviation curve, and where the curve cuts the magnetic line there is no deviation at all. To find on which point of the compass this corresponds run in on the horizontal line at the point of contact and see which point of the compass it coincides with on the left hand margin of diagram compass and that will be the compass point on which there is no deviation.

To find the deviation corresponding to any point between the points we have observed the deviation for as above, merely find the point of the compass at the margin of the card you desire the deviation for, and follow the horizontal line coinciding with it to the magnetic line. Then from this magnetic line count the number of degree spaces to the curve drawn and you have the amount of the deviation corresponding to that point of the compass lying directly abreast of it. If the deviation curve lies to the right of the magnetic line the Dev. is Ely., if to the left of the magnetic line the Dev. is Wly.

Of all methods what is more simple than the foregoing? It is simplicity in itself. We have established the fact that from four range bearings in going up the Soo river we are, by the aid of Baxter's diagram, enabled to find the deviation on every point of the compass in its western semi-circle, which is equal to saying that we can allow the proper correction to any course "up" Lake Superior. There is no other "graphic method" which is so simple as that of Baxter's, since all others require some instrument for measuring, whereas in this method you merely count off-handed. The method is so obviously plain compared with others that an error in your work can hardly occur.

Bound down the Soo river the shipmaster can by the same method and from the same ranges (by reversing the correct magnetic ranges as given above) find the deviation of his compass for the eastern semi-circle, affording a means of allowing the proper corrections to the correct magnetic courses to Lakes Erie and Michigan ports.

From first appearances Baxter's diagram looks to be a complicated affair, but this is only apparent since it is much more simple than it looks. If shipmasters will only give this device a fair trial and devote a little of their spare time to a study of its merits they cannot but help finding it so. It would seem to us that so valuable a device should find its way on board of every vessel afloat, and owners should buy them by the dozen and see to it that their boats were supplied with them and that the master use them for the purpose intended. Further, that this valuable method should be brought to the attention of the Supervising Inspector General of Steam Vessels with the idea of embodying it in the examination work for lake captains.

This method of ascertaining the Deviation of the Compass should be employed by the master at all times. It should be employed as a check by those shipmasters acquainted with azimuth work used in conjunction with Fields' Course Corrector, or other bearing instruments of this character. The sun may be overcast for days at a time rendering it impossible to take the required observations. Every shipmaster of ability is continually on the lookout for opportunities of this kind. This range method will likewise act as a proof in your azimuth work, and the two together will make you doubly sure of the accuracy or inaccuracy of your work.

BAXTER'S "GRAPHIC METHOD."

A most ingenious and valuable device has been invented lately by Captain John Baxter, for many years captain of the U. S. Lighthouse Tender "Haze". While the invention itself bears a recent date it, nevertheless, has been used for years by the captain in laying down his courses, plotting his bearings, converting courses from magnetic to true or compass and vice versa, calculating his deviations of compass on the different courses, and plotting his curve of deviations from a few observations. Indeed, the limit of its possibilites has not yet been reached, for the captain is continually discovering new uses for it of which he never dreamed. At first he used it simply for the conversion of courses and bearings. The Inspector of the Lighthouse District, a naval officer of long experience in navigation, with the greatest interest watched the captain use his simple instrument, and after proving to his own mind that the instrument is mathematically correct, strongly advised that it be patented and then placed on the market for the benefit of all navigators.

This device is for the purpose of solving many of the simple problems of navigation which daily confront the master and pilots of all lake or ocean craft. In laying down courses so many disasters have resulted from a mistake being made in applying the deviation or variation the wrong way, even when the master had perfect knowledge of the rules of such application, that a mechanical device which is absolutely correct under all circumstances, should be viewed with much satisfaction by all navigators. The human mind is liable to error, but a machine which is correct in the first instance will never make a mistake.

It will be noted that instructions for the use of the device are printed on the back. Besides these there are practical examples, dealing with nearly every possible condition, worked out for the guidance of the navigator. The examples alone are of great value as aids in obtaining courses or bearings under like conditions, especially if the master is in any doubt as to the correct way to apply the corrections.

If the device were of value only for the purpose of finding the deviations on the different compass courses it would be well worth all that is asked for it. A few observations on practically equidistant points around the compass will be sufficient to plot the curve of deviations. Two curves should be made, drawn in different colors, one for deviations when running light and the other when loaded.

In cases where there is very little deviation the curve can be distorted by letting two or more degree-spaces on the card represent one degree of deviation of the ship. For instance, suppose the maximum deviation in our table is 5 degrees W. Instead of counting off only five spaces to the

Generated on 2024-08-28 14:03 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

AROUND THE GREAT LAKES.

The barge C. J. Magill has been sold by Thomas Ryan of Buffalo to E. C. Calvert and Wm. P. Ellery of Detroit.

Repairs have been completed at Toledo on the steamer H. W. Smith which had been on the beach all winter at Buffalo.

The schooner Wayne which was pulled off the rocks in Lake Superior by the wrecker Favorite was towed to Houghton.

Benjamin L. Coles, former harbormaster at Buffalo has been appointed superintendent of the Crystal Beach line of passenger steamers.

The steamer Onoko which went aground near Detour, Monday night, has been released after lightering 600 tons upon the lighter Rescue.

Capt. Alex. McFarlane died at Detroit this week at the age of seventy years. Capt. McFarlane had formerly sailed in the Pickands, Mather fleet.

The Buffalo Dredging Co., and the Thomas Brown Dredging Co. have been awarded contracts to deepen Buffalo creek, the former upon its bid of $80,132 and the latter upon its bid of $88,200.

Mr. John Sampson who recently resigned as division superintendent of the Northwestern Railroad at Ashland, has been appointed superintendent of the Northwestern docks at Ashland, succeeding George Rose.

The small passenger steamer John Dewar was disabled between Pentwater and Ludington through some derangement of machinery. The passengers were taken off by another steamer and the Dewar later towed to port.

Larry Holland, chief engineer of the steamer Sir William Siemens was overcome by heat while the steamer was at Lorain this week. He died at the marine hospital, Cleveland, where he had been hurried by members of the crew.

George Uhler, supervising general of the steamboat inspection service, has been in the great lakes district for some time, but left Detroit for Washington on Saturday last. Gen. Uhler reported everything to be in satisfactory condition.

The United States Engineer's Office at Milwaukee has been notified by the contracting firm of Leatham & Smith of their success in raising the tug J. W. Bennett in Green Bay. The wreckers have therefore come in possession of the tug.

Hamilton M. Wright, owner of Point Lookout, a summer resort, secured an injunction restraining the steamer Frontenac from landing at the point. It appears that the Frontenac had been carrying passengers and freight to the point without Wright's permission.

The Crosby Transportation Co. has been givin charge of the hulk of the steamship Naomi after having filed a bond in the sum of $22,620, its appraised valuation. The Naomi has been in the hands of the United States marshal as a result of the libel suit to restore salvage begun by the steamers Saxona and D. G. Kerr.

Dredging the government channels in the Duluth-Superior harbor has been begun by the Duluth-Superior Dredge Co. The first machine was set at work on the shoals at the mouth of the Nenadji river and this work will probably take the better part of the summer to complete. The big dredge Old Hickory will soon be put at work upon the lake approach of the ship canal.

Wrecking master Harris W. Baker of Detroit, has succeeded in raising the schooner Emma L. Coyne which was sunk near Ballard's Reef recently by the tug Wallula. The Coyne is badly injured. She was struck at the turn of the bow on the port side and her bow is twisted about 4 ft. to starboard. Had it not been for her cargo she would have been cut clean through.

The United States Lake Survey steamer General Williams, which is sweeping and sounding the west end of Lake Erie, reports that a white lantern light is maintained by the owner on the wreck of the steamer Charles B. Packard, which was sunk in September, 1906, on the course between Detroit River light and Pelee Passage, 8 miles NW ⅛ W from Pelee Passage lighthouse.

MAINTAINING CHANNEL IN CURTIS BAY.

For maintenance of channels in Curtis bay and harbor of southwest Baltimore (Spring Garden) Md., dredging an estimated quantity of 56,250 cu. yds. awarded to Maryland Dredging & Contr. Co., Baltimore, Md., at 15 cents per cubic yard. Bids opened June 3, 1907, by Col. R. L. Hoxie, Corps of Engineers, U. S. A., at U. S. Engineer Office, 812 St. Paul street, Baltimore, Md.

BIDS FOR TORPEDO STRUCTURES.

For torpedo structures at Fort Screven, Ga. Bids opened by Col. Dan C. Kingman, Savannah, Ga.

Items.	Grant Wilkins, Atlanta, Ga.	Dickson & Hussey, Savannah, Ga.	Monad Eng. Co., N. Y.
Torpedo Storehouse	$12,900	$15,000	$14,655
Cable Tank	7,500	11,300	10,949
Three room addition to Mining Casemate	2,630	3,200	3,490
Loading Room	5,000	9,300	8,831
Double Mine Observation Station. (Primary)	4,600	4,874	5,054
Double Mine Observation Station. (Secondary)	2,000	2,831	3,011

Bids opened May 15, 1907.

BIDS FOR WHARF AT FORT SCREVEN, GA.

For wharf and approach, Fort Screven, Ga. Bids opened June 5, 1907, by Lt. Col. Dan C. Kingman, Savannah, Ga.

Monad Engineering Co., New York, N. Y.	$49,300.00
Geo. M. Gadsden, Savannah, Ga.	49,470.00
Grant Wilkins, Atlanta, Ga.	34,500.00

DIKES AND DAMS IN SAVANNAH HARBOR.

Repairing, raising, strengthening and extending training walls, dikes and spur dams in Savannah, Harbor, Georgia. Estimated quantities: Stone, 30,000 tons; brush fascines, 50,000 cubic yards; piling, 2,200; timber, 6,500 ft. B. M. Bids opened July 5, 1907, by Lt. Col. Dan C. Kingman.

	Geo. M. Gadsden, Savannah, Ga.	D. Power & Co., Savannah, Ga.	R. G. Ross, Jacksonville, Fla.
Stone, per ton	$ 3.30	$ 2.25	$ 2.90
Brush fascines, cubic yard	0.59	0.51	0.75
Piling, each	5.80	5.25	7.75
Timber, per M. ft. (All in place.)	38.00	40.00	40.00

DREDGING IN FERNANDINA HARBOR.

Dredging in Harbor of Fernandina, Florida. (Estimated quantity, 525,000 cubic yards.) Bids opened July 1, 1907.

P. Sanford Ross, Inc., Jersey City, N. J.	19¼c per cubic yard.
Roderick G. Ross, Jacksonville, Fla.	20c per cubic yard.
North American Dredging Co., Oakland, Cal.	17¾c per cubic yard.

REMOVING STEEL LOCK GATE.

Abstract of proposals for removing a steel lock gate and building and erecting in its place a new steel lock gate, at lock 6, Ohio river, received in response to advertisement of May 13, 1907, opened June 12, 1907, by Maj. H. C. Newcomer, Corps of Engineers:

No.	Name and address of bidder.	For removal of existing gate	For new steel gate.	Total.
1	Penn Bridge Co., Beaver Falls, Pa.	$1,900.00	$21,390.00	$23,290.00
2	Pennsylvania Contracting Co., Pittsburg, Pa.	3,750.00	23,983.00	27,733.00

DREDGING CHESAPEAKE BAY, RIVERS AND HARBORS.

Dredging of rivers and harbors on the east shore of Chesapeake bay, Md. Bids opened by Colonel R. L. Hoxie, Corps of Engineers, U. S. A., June 3, 1907, at U. S. Engineer Office, 812 St. Paul street, Baltimore, Md.

Name and address of Bidders.	Approximate Quantity. cu. yds.	Md. Dredging & Contracting Co., Balto., Md.	Charles P. Grim, Phila., Pa.	River and Harbor Improvement Co., Phila., Pa.	Norfolk Dredging Co., Norfolk, Va.	L. M. Lewis, Norfolk, Va.
Quantity and price per cubic yard	675,037	19c*	21½c	21c	22c	21c

*Awarded to Maryland Dredging & Contracting Co., Baltimore, Md. To be completed in 24 months.

Generated on 2024-08-28 14:01 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

left of the magnetic line and drawing our curve through that point, count off 10 spaces, if doubling is desired, or 15 spaces if trebling, and draw the curve as in the ordinary method. This distortion should always be kept in mind when working with the card after the curve is plotted.

Objection is sometimes made by a few of our best educated officers that they prefer to trust to a paper, pencil and their own figures rather than to any mechanical method of solving problems. There is no man who is so infallible in his calculations that a check is never necessary; and for the purpose of a check the device is invaluable to such navigators. We have all had the experience of making a mistake in adding a column of figures and being unable to discover it. But the adding machine never adds incorrectly, and what banking house or large commercial house is to-day without one of these valuable little mechanical devices?

BAXTER'S COMPASS DIAGRAM

This device consists of a diagram of little squares, each one of which is equivalent to one degree on the compass. In length there are 360 of these degree squares. The left hand margin of the diagram, which is some 22 in. in length by 5 in. in width, is marked by the compass points, and fractional points, the card being straightened out instead of circular. The small squares representing degrees are made to coincide with their equivalent in points and fractional points on this margin; that is, North and South are marked zero, and East and West 90°, hence degrees may be readily converted into compass points or fractions thereof, and vice versa, compass points into degrees. The diagram is formed by horizontal and vertical lines. At each five degrees the lines are drawn heavy and those between them are made lighter. These lines are numbered according to the number of degrees they represent on the compass card. The vertical line in the center of the diagram, which separates the two sections of the card represents the magnetic line, and is marked zero on the horizontal. In fact the circular card of the compass is laid out into squares and straight lines instead of spherical. The correction of courses and bearings, and the finding of the deviation is performed by mere inspection, or by method of construction, no calculation by figures is necessary beyond reading from the scale; hence all calculations are performed by the card itself.

The only instrument to be used in connection with the card is an isosceles right-angled triangle, made of transparent celluloid, and is called the corrector. The base of this triangle is precisely the same width as that of either section of the diagram. When the base line of the corrector (triangle) is laid parallel with a horizontal line of the diagram, the hypotenuse of the corrector cuts each one of the little squares representing degrees into its own figure, or shape, that is, an isosceles right-angled triangle; in other words the whole thing solves itself into isosceles right-angled triangles. Then whichever way the corrections are to be applied, whether to the right or to the left (easterly or westerly) depends upon which angle of the corrector you use for a starting point. From this it must be observed that the diagram and corrector perform the operation of simple addition and subtraction, by construction, since the triangles passed over by the edge of the corrector are all equal.

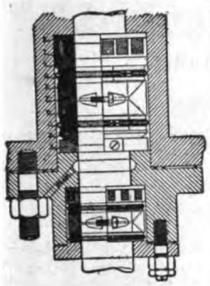
The diagram may also be used for laying down the deviation curve after it has been found for ship's head on different points. The great advantage of this is that the deviation does not have to be found for an exact point of the compass, so long as these points are not too far removed from each other. There are various "graphic methods" of this nature on the market, but this method seems peculiarly adapted for this purpose. It requires no calculation and only a moderate degree of neat-handiness. The method consists of two parts, the diagram and the curve. The diagram is the same for all vessels.

BOOK REVIEW.

Lake Pilots' Handbook is a new lake publication compiled by Capt. George Trimble, of Port Huron, Mich. The book is devoted to a general information on the subject of the great lakes. For years the captain has been an enthusiastic collector of marine books and papers, and from them he has culled all the valuable information that should be of interest to the lake sailor. The first pages of the book are devoted to a history of the great lakes; the building of the first sailing and also the first steam vessels on these waters. A description of the lakes and their connecting rivers and canal systems is given some space. The lighthouses, the steamboat inspection, the life saving, the weather bureau, the marine hospital, the marine postal, hydrographic office and lake survey services all come in for some attention. A list with addresses of all the lake associations and unions is printed; also the laws regarding licensed officers of steamers of the lakes, together with a synopsis of the navigation laws of those states bordering on the lakes. Pilot rules for the great lakes and connecting rivers are reproduced in full; United States and Canadian storm signal systems; bridge signaling for the various ports on the lakes, dry dock system, populations of lake cities and towns, land marks on Lake Superior, etc. About a dozen pages are devoted to "things worth knowing." Bearings of piers and breakwaters, distance tables for the lakes and rivers, distances by various routes, life saving stations, fog whistles, lighthouses, depths of water in the smaller harbors, are all given considerable space and attention. A small portion of the book is devoted to the science of lake navigation, but only in a smattering way. The last part of the book is devoted to miscellaneous subjects, such as Sailors' Phrases, Waves, Depths of the Ocean, Steam, Horsepower of Engines and Boilers, Knots of All Kinds, Rules of Arithmetic, etc., etc. There is but very little in the book that is original, but since the publication is more on the compilation order this should not be expected. More of the book should have been devoted to the modern practices of lake navigation. The two best things in the book, according to our way of thinking, are the articles on "Government Soundings" and "The Barometer." These are really live issues, and are instructive. The price of the book and where to get it will be advertised later on.

It is reported to the United States Lake Survey that the steamer Algonquin, Capt. John Williams, master, struck some submerged obstacle off Whitefish Point, Lake Superior, on May 26. On June 27 the mate of the Algonquin sighted what he took to be the same construction about 5 miles SE by E ½ E from Whitefish Point, and estimated it had drifted 4 or 5 miles since the previous striking. It appeared to be a portion of a wooden vessel with spar projecting about 4 feet above water surface. As the Algonquin was considerably damaged by the collision, masters are warned to be on the lookout for the obstruction, and if sighted to report the same promptly to the Lake Survey Office, Detroit.

Generated on 2024-08-28 14:06 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN



Katzenstein's Self-Acting Metal Packing

For PISTON RODS, VALVE STEMS, etc. of every description for Steam Engines, Pumps, etc., etc. Adopted and in use by the principal Iron Works and Steamship Companies in this and foreign countries.

FLEXIBLE TUBULAR METALLIC PACKING, for slip-joints on Steam Pipes, and for Hydraulic Pressure.

For full particulars and reference, address

L. KATZENSTEIN & CO.

General Machinists.

358 West Street, New York.

Good Jobbing Accounts Desired for Republic Mechanical Rubber Goods

The Republic Belting and Supply Co.

CLEVELAND, OHIO

Manufacturers of **LEATHER BELTING**

The Spar Varnish that Lasts

MARINE SPAR

Resists the destructive action of salt or fresh water, moisture, etc., BETTER than any other make of Spar Varnish in the market.

It works freely, dries hard and is exceedingly durable.

WRITE for our (free) spindle finished with Oceana and test for yourself, the wonderful water-resisting properties of this specialty.

Standard Varnish Works

THE LARGEST VARNISH WORKS IN THE WORLD

29 Broadway, NEW YORK — 2620 Armour Ave., CHICAGO

LONDON BERLIN BRUSSELS

Canadian Branch: International Varnish Co., Ltd., Toronto

Geo. L. McCurdy

169 Jackson Boulevard

CHICAGO ILLINOIS

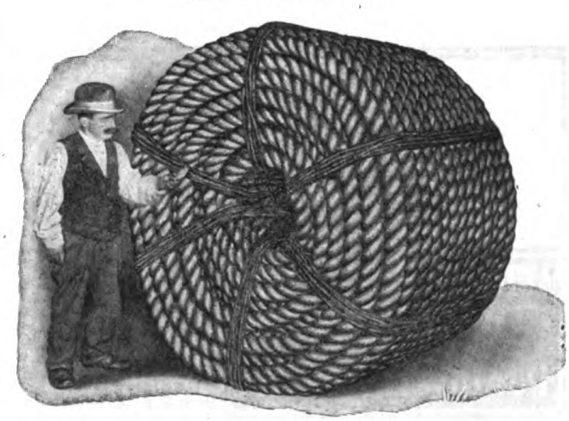
INSURANCE

HULLS and CARGOES

DIRECT REPRESENTATIVE OF LEADING AMERICAN AND FOREIGN UNDERWRITERS

THE UPSON-WALTON CO.

Cleveland, O.



EVERYTHING FOR THE SHIP

MOST COMPREHENSIVE LIST OF CHANDLERY SUPPLIES CARRIED ON THE GREAT LAKES : : : : : : : : : :

Leading Out-Fitters of Vessels

Generated on 2024-08-28 14:01 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

INDEX OF ADVERTISERS

The star (*) indicates that the advertisement appears alternate weeks. For addresses see advertisements on page noted.
The dagger (†) indicates that advertisement appears once a month.

†Akers Steering Co.....Cover
Almy Water Tube Boiler Co.. 37
American Blower Co..... 52
American Injector Co..... 11
American Line 47
American Sawdolet Co..... 38
American Ship Building Co... 4
American Ship Windlass Co.. 2
Armstrong Cork Co..... 52
*Armstrong Manufacturing Co. —
†Ashton Valve Co..... —
Atlantic Works 47
†Atlantic Works, Inc..... —

Babcock & Penton..... 49
Baker, Howard H., & Co.... 52
Belcher, Fred P..... 48
Boland, J. J..... 48
*Boston & Lockport Block Co. —
†Boucher Mfg. Co., The H. E. —
Bowers, L. M., & Co..... 51
Breymann, G. H., & Bros.... 39
Briggs, Marvin 38
Brown & Co..... 48
†Brown Hoisting Machinery Co. ..... —
Buffalo Dredging Co..... 39
Buffalo Dry Dock Co..... 5
†Buffalo Ship Chandlery & Supply Co. ..... —
Bunker, E. A..... 52

Chase Machine Co..... 36
Chicago Ship Building Co... 4
Cleveland & Buffalo Transit Co. 47
Cleveland City Forge & Iron Co. 51
*Collingwood Shipbuilding Co. —
†Columbian Rope Co..... —
Continental Iron Works..... 2
Cory, Chas., & Son..... 50
Cramp, Wm., & Sons S. & E. B. Co..... 8
†Crescent Machine Co..... —
Curr, Robert 49

Dake Engine Co..... 3
Dearborn Drug & Chemical Wks. 3
Delany, P., & Co..... 37
Delaware River Iron S. B. & E. Works 51
Detroit Ship Building Co.... 4
Dixon, Joseph, Crucible Co.. 43
Donnelly Salvage & Wrecking Co. 43
Douglas, G. L., Jr..... 48
Drein, Thos., & Son..... 43
Dunbar & Sullivan Dredging Co. 39

Elphicke, C. W., & Co..... 48
*Emerson Shoe Co..... —
†Empire Shipbuilding Co..... —

Falls Hollow Staybolt Co..... 41
Fix's, S., Sons..... 50
Fletcher, W. & A., Co..... 47
Fogg, M. W..... 50
Fore River Ship Building Co. 47
Furstenau, M. C..... 49

General Electric Co..... 52
Gilchrist, Albert J..... 48
†Goldschmidt Thermit Co..... —
Goulder, Holding & Masten.. 49
Great Lakes Dredge & Dock Co. 39
Great Lakes Engineering Wks.. 12
Great Lakes Register..... 49
*Great Lakes Towing Co.....

Hall, John B..... 48
Hanna, M. A., & Co..... 41
†Hardy & Dischinger Co..... —
Hawgood, W. A., & Co..... 48
Helm, D. T., & Co..... 48
Holmes, Samuel 48
Hoyt, Dustin & Kelley..... 48
Hunt, Robert W., & Co..... 49
Hutchinson & Co..... 48
Hyde Windlass Co..... 52

†Ideal Pump Governor Co... —
International Mercantile Marine Co. 47
Jenkins Bros. 52
Jenkins, Russell & Eichelberger 48
Johnson Bros. 37

Kahnweiler's Sons, David.... 51
Katzenstein, L., & Co..... 35
Kidd, Joseph 49
Kingsford Foundry & Machine Works 37
Kremer, C. E..... 48

*Le Mois Scientifique et Industrial ..... —
Levine & Co..... 41
Lockwood Mfg. Co..... 50
Lorain Coal & Dock Co..... 49
Lundin, A. P..... 52
Lunkenheimer Co. 11

McCarthy, T. R..... 48
McCurdy, Geo. L..... 35
McKinnon Iron Works..... 51
MacDonald, Ray G..... 48
Mallory Line 47
*Marine Iron Co., Bay City, Mich. 11
†Marine Iron Works..... —
*Marine Mfg. & Supply Co. 12
Marshall, Alexander 48
Martin-Barriss Co. 43
Maryland Steel Co..... 10
Maytham, Frank 48
Mehl, Edward 48
Milwaukee Dry Dock Co..... 5
Mitchell & Co..... 48
Morse, A. J., & Son..... 49

Nacey & Hynd..... 49
†New Bedford Boiler & Machine Co. ..... —
Newport News Ship Building & Dry Dock Co..... 6
New York & Cuba Mail S. S. Co. 47
New York Shipbuilding Co... 7
†Nicholson Ship Log Co..... —
Northern Dredge Co..... 39
Northwestern Steam Boiler & Mfg. Co. 37

O'Connor, J. J..... 48
†Oster Mfg. Co..... —
Otis Steel Co..... 9

Parker Bros. Co..... 48
Penberthy Injector Co..... 11
Pickands, Mather & Co..... 41
Pittsburg Coal Co..... 9
Prindiville & Company..... 49

Quintard Iron Works Co..... 50

Red Star Line..... 47
†Reilly Repair & Supply Co.. —
Republic Belting & Supply Co. 35
Richardson, W. C..... 48
*Ritchie, E. S., & Sons..... —
Roberts Safety Water-Tube Boiler Co. 11
Roelker, H. B..... 50
†Rogers Steam Oil Separator Co ..... —
Root, W. O..... 49
Ross Valve Co..... 50

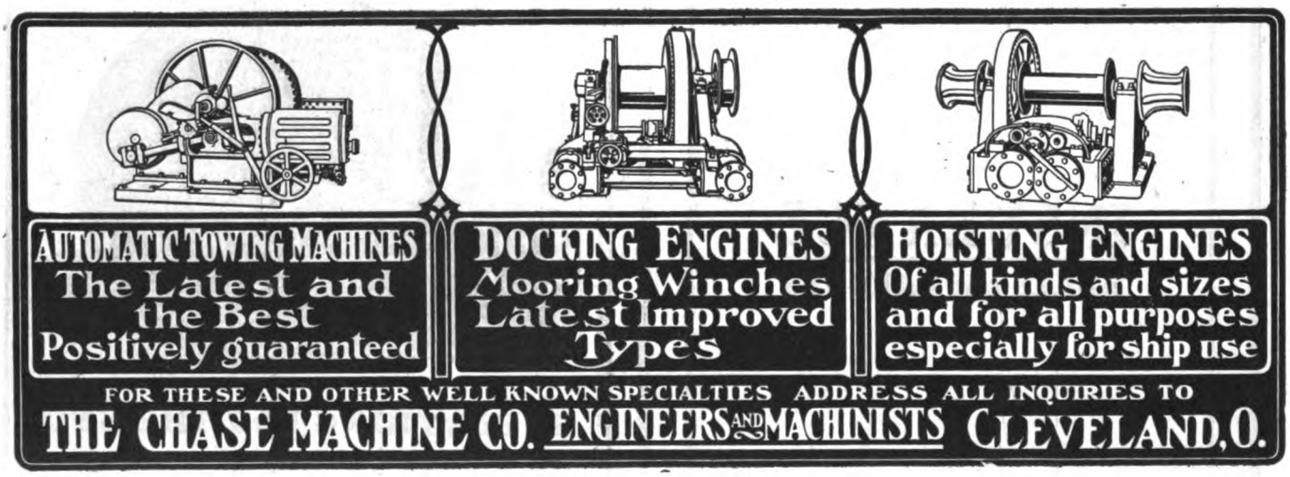
Safety Car Heating & Lighting Co. 5
Scherzer Rolling Lift Bridge Co. 43
Schrader's A., Son, Inc..... 50
†Scoville Check Valve Co... —
†Seneca Chain Co..... —
Shaw, Warren, Cady & Oakes 48
*Shelby Steel Tube Co..... 37
Sheriffs Mfg. Co..... 43
Shipping World Year Book... 50
Siggers & Siggers..... 38
Smith Coal & Dock Co., Stanley B. 3
Smooth-On Mfg. Co..... 51
†Spence Mfg. Co..... —
Spencer, H. R..... 48
Standard Varnish Works..... 35
Starke, C. H., Dredge & Dock Co. 39
Stratford, Geo., Oakum Co... 43
Submarine Signal Company.. 9
Sullivan, D., & Co..... 48
Sullivan, M. 39
†Superior Iron Works..... —
Superior Ship Building Co... 4

Taylor Water-Tube Boiler Co. 37
Tietjen & Lang Dry Dock Co. 50
*Toledo Fuel Co..... —
Toledo Ship Building Co.... 5
†Toledo White Lead Co..... —
Trout, H. G..... 43
Truscott Boat Mfg. Co..... 2

Upson-Walton Co. 35
†United States Graphite Co.. —

Vance & Joys Co..... 48

Walker, Thomas, & Son..... 3
Ward Line 47
Warner, Dorr E..... 48
Warner & Swasey..... 43
*Watson-Stillman Co. ..... —
†Wheeler Condenser & Engineering Co. ..... —
Willcox, Peck & Hughes..... 38
†Williams Gauge Co..... —
Williams, D. T., Valve Co... 2
Wood, W. J..... 49
†Woodhouse Chain Works.... —

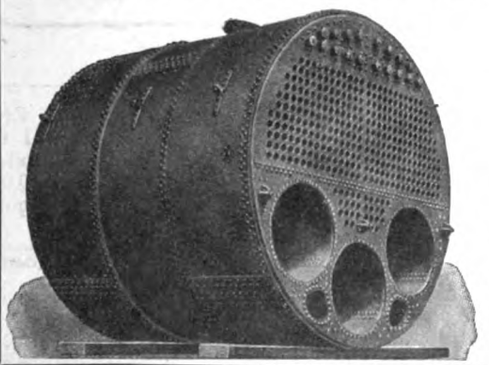

AUTOMATIC TOWING MACHINES
The Latest and the Best
Positively guaranteed
DOCKING ENGINES
Mooring Winches
Latest Improved Types
HOISTING ENGINES
Of all kinds and sizes and for all purposes especially for ship use
FOR THESE AND OTHER WELL KNOWN SPECIALTIES ADDRESS ALL INQUIRIES TO
THE CHASE MACHINE CO. ENGINEERS AND MACHINISTS CLEVELAND, O.

"The up-to-date manufacturer of to-day realizes the importance and value of space in his trade papers and exercises good judgment in the preparation of his copy."—*Printers Ink.*

Our Ad Designing Department makes just this thing possible. All you have to do is to give us a suggestion and we put it into attractive shape.

Generated on 2024-08-28 14:01 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Modern Marine Boilers



Write

Johnston Brothers

Ferrysburg, Michigan

MARINE BOILERS

Marine Repairs

Newburgh Steam Boiler Works

P. DELANY & CO.

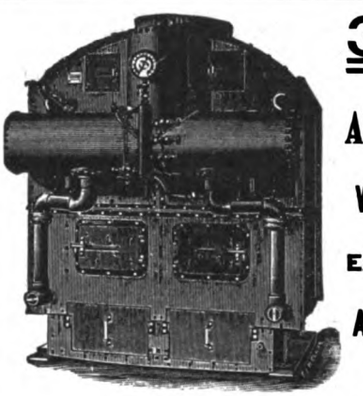
Newburgh, N. Y.

Taylor Water Tube Boiler Co.

Vertical Tubes, sectional, large steam space and liberating area.
Fire box, combustion chamber, and course for the furnace gases similar to the Scotch Mariner
Free circulation type.

Send for full description.

322 Franklin St.
DETROIT, MICH.



350 STEAM VESSELS

Now Equipped With

ALMY'S PATENT SECTIONAL Water Tube Boilers

Bear Evidence of Their

Excellent Qualities

ALMY WATER-TUBE BOILER CO

PROVIDENCE, R. I.

Northwestern Steam Boiler & Mfg. Co.

DULUTH, MINN.

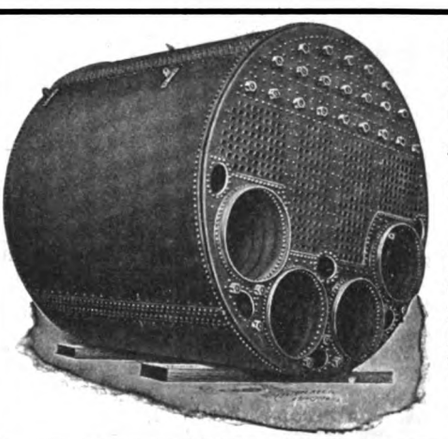
Manufacturers of

BOILERS, ENGINES AND MACHINERY

Special facilities for Marine Work. Repairs promptly attended to Night or Day.

We carry a complete line of Marine and Engineers' Supplies.

TELEPHONES: OFFICE AND WORKS, 615.
RESIDENCE CALLS: M. A. RYAN, *Pres. and Gen'l Mgr.*, 776-R.
J. H. OPPERMAN, *Secretary*, 579-R; E. KRIZ, *Superintendent*, 557-M.



MARINE BOILERS

OF ALL TYPES

KINGSFORD FOUNDRY & MACHINE WORKS,

Oswego, N. Y.

A Handy Little Chart of the Great Lakes

Mounted on Linen. 10½ X 15 INCHES. Price Postpaid, 25 cts.

Clearly showing every port on the Great Lakes from Clayton to Duluth. It is small enough to fold up and carry in the coat pocket or pigeon hole of a desk, and is also very suitable for framing.

With this little chart near at hand, you save the trouble of stepping to a chart case and taking out a great big three-foot square chart that is awkward to handle.

The Most Accurate Small Chart Ever Published.

FOR SALE BY

THE MARINE REVIEW, - - CLEVELAND.

Generated on 2024-08-28 13:57 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

CLASSIFIED ADVERTISING SERVICE

PROPOSALS.

U. S. Engineer Office, 57 Park St., Grand Rapids, Mich., June 26, 1907. Sealed proposals for Repair of North Pier at Holland, Mich., will be received here until 3 P. M., July 26, 1907, and then publicly opened. Information furnished on application. M. B. Adams, Col., Engrs.

U. S. Engineer Office, Milwaukee, Wis., July 3, 1907. Sealed proposals for building crib breakwaters at Racine and Kenosha harbors, Wis., will be received here until 2 P. M., August 2, 1907, and then publicly opened. Information furnished on application. W. V. Judson, Major, Engrs.

U. S. Engineer Office, Detroit, Mich., July 16th. Sealed proposals for dredging harbor at Cheboygan, Mich., will be received at this office until 3 P. M., August 15, 1907, and then publicly opened. Information furnished on application. Chas. E. L. B. Davis, Col. Engrs.

U. S. Engineer Office, Buffalo, N. Y., July 17, 1907. Sealed proposals for construction of stone-concrete superstructure on outer breakwater at Oswego, N. Y., will be received here until 11 a. m., August 17, 1907, and then opened. Information on application. H. M. Adams, Col. Engrs.

SEALED PROPOSALS will be received at the office of the Light-House Board, Washington, D. C., until 2 o'clock P. M., August 19, 1907, and then opened, for the construction of a single-screw steel steam light-vessel, to be delivered either at Charlevoix, Mich., Detroit, Mich., or Tompkinsville, N. Y., in accordance with specifications, copies of which, with blank proposals and other information, may be had upon application to the Light-House Board, Washington, D. C.

COAL HANDLING MACHINE

ONE BROWN RAPID COAL Handling Machine for sale. Now in use at Toledo Docks. This Machine is in very fair shape and is to be replaced by one of larger capacity. Will be glad to furnish any information to interested parties.

C. B. Duffy, P. A.
Hocking Valley Ry.
Columbus, O.

VESSEL BROKER.

I HAVE VESSELS OF MOST every kind—from 10 tons to 6,000 tons— to sell for their owners, at reasonable prices. Anybody wishing to buy or sell a boat should call on or write Fred A. Bradley,

247 Delaware Ave.,
Buffalo, N. Y.
Bell 'Phone, Tupper 5933.

STEAMERS FOR SALE.

THE LIGHTHOUSE STEAMER Haze, 145 ft. long, 27-ft. beam, 9-ft. draught, 500 tons capacity, 300 horsepower engine and boiler, suitable for passenger or freight business, fully equipped. Steam capstan, donkey boiler. Jacob Ullman, 46 Lloyd street, Buffalo, N. Y.

STEEL TWIN SCREW PASSENger and Freight Steamer for sale for August delivery. Length 210 ft.; breadth 31 ft.; draft loaded 7½ ft.; built in early '90s; speed 14 miles per hour. 28 staterooms; 90 berths. Triple expansion engines, working pressure 180 lbs. per sq. in. For further particulars apply to Wm. E. Waterhouse, 15 Whitehall Street, New York City.

CITY OF TRAVERSE FOR sale; passenger and freight steamer. Length, 214:5 ft.; breadth, 33.2 ft.; depth, 12.8 ft. Tonnage, 1,153. Steeple compound engine, 650 h. p. Steamer in excellent condition. Owing to the character of the business vessel had been engaged in the past two seasons, many thousand dollars were spent in bringing her up to A-1 condition, $7,000 having been spent alone this spring. Will go as a rare bargain for cash. Address C. H. Colby, 260 State St., Chicago, Ill.

A WELL ESTABLISHED LINE of excursion steamers near Boston, for sale cheap for cash. Can now be seen in commission. An excellent opportunity for an energetic steamboat captain with a moderate capital. For further particulars address "Steamboat," care of the Marine Review, Cleveland, Ohio.

BARGE WANTED

SMALL STEAM BARGE WANTed for cash, to carry 500 to 800 tons. Address "Cleveland," The Marine Review, Cleveland, Ohio.

TUG WANTED

SMALL TUG WANTED, NOT less than 16 x 18 engine, with good boiler. Write stating price and giving full particulars to the Mud Lake Lumber Company, Cleveland, Ohio.

TUGS FOR SALE.

TUG FOR SALE, 14 x 16 ENgine, 44 ft. 4 in. length, beam, 11 ft. 2 in.; depth, 6 ft. 5 in.; hull and boiler as good as new. Price, $2,500.00. Write F. Alberts & Sons, Muskegon, Mich.

THE FOLLOWING TUGS AT SATISFACTORY PRICES

Wm. E. Rooney, 12 x 12, 100 lbs. of steam.
Uncle Sam, 17 x 17, 90 lbs. of steam.
Frank S. Butler, 18 x 20, 100 lbs. of steam.
Fanny L. Baker, 18 x 18, 125 lbs. of steam.
American Eagle, 24 x 26, 125 lbs. of steam.

For further information apply to L. S. Sullivan, Toledo, O.

BOOKS

TRUE BEARINGS OF CELESTIAL OBJECTS FOR THE GREAT LAKES. By Frank Henrich, 315 Providence Bldg., Duluth. Price $3.50 postpaid.

FOR SALE, MISCELLANEOUS.

NEAFIE & LEVY F & A COMpound 26″-50″ x 30″ with Surface Condenser and Pumps. Will alter to 22″-50″ x 30″ for high steam.

13½ K. W. Electric Lighting Set.
Williamson Steering Engine.
Two Hawser Pullers (Capstans).
Two Providence Steam Windlasses.
Wheeler Surface Condenser.
Blake Vertical Duplex Air Pump and Jet Condenser. 7½″ steam, 16″ air, 12″ stroke.
Worthington Duplex Air Pump & Jet Condenser 9″ x 12″ x 10″.
D. C. Sturtevant Blower & Engine.
Two Scotch Boilers 12′ x 12′.
Two Scotch Boilers 11′ x 12′.
Two Scotch boilers 13½′ x 12′.

MARVIN BRIGGS, INC.,
154 Nassau Street, New York.

WILLCOX, PECK & HUGHES
SUCCESSORS
CHAS. E. & W. F. PECK
NEW YORK, No. 3 South William Street.
Average Adjusters. Insurance Brokers.
BUFFALO CLEVELAND CHICAGO
MINNEAPOLIS SEATTLE NEW ORLEANS
REPRESENTED BY
C. T. BOWRING & CO., (Insurance) Ltd.,
5 and 6 Billiter Ave., LONDON,
and at "LLOYD'S" LONDON.
HULLS AND CARGOES.
We place insurances in the most advantageous markets, having unequaled facilities for procuring, in the interests of our clients, the best obtainable rates and terms from the strongest Foreign and Home companies.
We Represent the Assured

PATENTS
TRADEMARKS AND COPYRIGHTS.
25 Years Practice.
Specialty: "Working on the Failures of Others"
SIGGERS & SIGGERS PATENT LAWYERS
Suite 11, National Union Inc. Bldg., Washington D. C.

SHIP FLOORING
Sawdolet (made of wood fiber, and mineral substances) can be applied to steel decks cheaply. It is fire proof, water proof, dust proof, and vermin proof. Can be colored any tint and is practically indestructible and monolithic. Samples submitted and estimates furnished.
American Sawdolet Co. 903 Park Building CLEVELAND

Generated on 2024-08-28 14:01 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

M. SULLIVAN

DREDGING OF ALL KINDS

THE REMOVING OF DEEP WATER EARTH AND ROCK A SPECIALTY. - - -

721 West Ferry St.

BUFFALO, - - - N. Y.

Great Lakes Dredge & Dock Company

RIVER AND HARBOR IMPROVEMENTS

Foundations, Bridges, Piers, Breakwaters, Lighthouses, Tunnels, Pneumatic and Submarine Work.

CHICAGO

DULUTH CLEVELAND TOLEDO

SAULT STE. MARIE

G. H. Breymann & Bro's

CONTRACTORS FOR PUBLIC WORKS

Dredging, Dock Building, Etc.

5, 6 AND 7 MARINE BUILDING
TOLEDO, OHIO.

NORTHERN DREDGE COMPANY

Dipper and Clam Shell Dredges Especially Equipped for Rock Work and for Very Deep Dredging.

General Contractors on all MARINE WORK

Providence Bldg., DULUTH, MINN.

C. H. STARKE DREDGE & DOCK CO.,

Contractors for Public Works.

DREDGING, PILE DRIVING,
AND
SUBMARINE PIPE LAYING.

Canal Street, West of First Avenue,

Milwaukee, - - Wisconsin.

Buffalo Dredging Co.

GENERAL CONTRACTORS
ON
SUBMARINE WORK

Office
D. S. Morgan Bldg. BUFFALO, N. Y.

Dunbar and Sullivan

DREDGING

Company

BUFFALO, N. Y.

REMOVE SUBMARINE ROCK OR EARTH

Generated on 2024-08-28 14:04 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

BUYERS' DIRECTORY OF THE MARINE TRADE.

For a more complete classification than that represented by advertisers in The Marine Review, see the BLUE BOOK OF AMERICAN SHIPPING, Marine and Naval Directory of the United States, published by The Marine Review, Cleveland.

[See accompanying Index of Advertisers for full addresses of concerns in this Directory.]

AIR COMPRESSION, HOISTS.
Great Lakes Engineering Works....Detroit.

AIR PORTS, DEAD LIGHTS, ETC.
Marine Mfg. & Supply Co.....New York.

AIR PUMPS AND APPLIANCES.
Fore River Ship & Engine Co.....Quincy, Mass.
Great Lakes Engineering Works....Detroit.

ANCHORS.
Bowers, L. M. & Co.....Binghamton, N. Y.

ANTI-FRICTION METALS.
Cramp, Wm. & Sons....Philadelphia.

ANTI-RUST COATINGS.
Toledo White Lead Co., Toledo, O.

ARTIFICIAL DRAFT FOR BOILERS.
American Ship Building Co.....Cleveland.
Detroit Ship Building Co....Detroit.
Great Lakes Engineering Works....Detroit.

ASH EJECTORS.
Great Lakes Engineering Works....Detroit.

ATTORNEYS AND PROCTORS IN ADMIRALTY.
Gilchrist, Albert J.....Cleveland.
Goulder, Holding & Masten.....Cleveland.
Hoyt, Dustin & Kelley....Cleveland.
Jenkins, Russell & Eichelberger....Cleveland.
Kremer, C. E. .....Chicago.
MacDonald, Ray G.....Chicago.
Marshall, Alexander...Duluth, Minn.
Maytham, Frank.....Buffalo
Shaw, Warren, Cady & Oakes.....Detroit.
Spencer, H. R.....Duluth, Minn.
Warner, Dorr E.....Cleveland.

BAROMETERS, MARINE GLASSES, ETC.
Ritchie, E. S. & Sons.....Brookline, Mass.

BLOCKS, SHEAVES, ETC.
Boston Lockport Block Co.....Boston, Mass.

BLOWERS.
American Blower Co., Detroit, Mich.

BOAT BUILDERS.
Drein, Thos. & Son.....Wilmington, Del.
Truscott Boat Mfg. Co.....St. Joseph, Mich.

BOILER COMPOUNDS.
Dearborn Drug & Chemical Works..Chicago.

BOILER MANUFACTURERS.
Almy Water Tube Boiler Co.....Providence, R. I.
American Ship Building Co.....Cleveland.
Atlantic Works..East Boston, Mass.
Briggs, Marvin.....New York.
Chicago Ship Building Co..Chicago.
Cramp, Wm. & Sons..Philadelphia.
Delany, P. & Co. Newburgh, N. Y.
Detroit Ship Building Co....Detroit.
Fletcher, W. A. & Co.....Hoboken, N. J.
Fore River Shipbuilding Co.....Quincy, Mass.
Great Lakes Engineering Works....Detroit.
Kingsford Foundry & Machine Works .....Oswego, N. Y.
Maryland Steel Co.....Sparrow's Point, Md.
Marine Iron Works.....Chicago.
Milwaukee Dry Dock Co.....Milwaukee.
New York Shipbuilding Co.....Camden, N. J.
Northwestern Steam Boiler & Mfg. Co.....Duluth, Minn.
Quintard Iron Works Co.....New York.
Roberts Safety Water Tube Boiler Co. .....New York.
Superior Ship Building Co.....Superior, Wis.
Taylor Water Tube Boiler Co....Detroit.
Toledo Ship Building Co.....Toledo.

BOILER STAYBOLTS, IRON OR STEEL, HOLLOW OR SOLID.
Falls Hollow Staybolt Co.....Cuyahoga Falls, O.

BRASS GOODS.
Penberthy Injector Co. .....Detroit, Mich.

BRASS AND BRONZE CASTINGS.
Cramp, Wm. & Sons.....Philadelphia.
Fore River Ship & Engine Co.....Quincy, Mass.
Great Lakes Engineering Works..Detroit.

BRIDGES, BUILDERS OF.
Scherzer Rolling Lift Bridge Co....Chicago.

BUCKETS, ORE AND COAL.
Brown Hoisting & Conveying Machine Co..... Cleveland.

CABIN AND CABINET FINISHING WOODS.
Martin-Barriss Co.....Cleveland.

CABLE CREASE.
U. S. Graphite Co., Saginaw, Mich.

CANVAS SPECIALTIES.
Baker & Co., H. H.....Buffalo.
Bunker, E. A.....New York.
Upson-Walton Co.....Cleveland.

CAPSTANS.
American Ship Windlass Co.....Providence, R. I.
Dake Engine Co.....Grand Haven, Mich.
Hyde Windlass Co.....Bath, Me.
Marine Iron Wks.....Chicago, Ill.
Marine Mfg. & Supply Co.....New York.

CEMENT, IRON FOR REPAIRING LEAKS.
Smooth-On Mfg. Co.....Jersey City, N. J.

CHAIN SURVEYORS, HOISTS.
Brown-Hoisting Machinery Co.....Cleveland.
General Electric Co.....Schenectady, N. Y.

CHAINS.
Seneca Chain Co.....Kent, O.
Woodhouse Chain Works.....Trenton, N. J.

CHAIN HOISTS.
Boston & Lockport Block Co.....Boston, Mass.
Republic Belting & Supply Co.....Cleveland.

CHARTS.
Penton Publishing Co....Cleveland

AND CHRONOMETERS.
Ritchie, E. S. & Sons.....Brookline, Mass.

COAL PRODUCERS AND SHIPPERS.
Hanna, M. A. & Co.....Cleveland.
Lorain Coal & Dock Co.,.....Cleveland, O.
Pickands, Mather & Co....Cleveland.
Pittsburg Coal Co.....Cleveland

COAL AND ORE HANDLING MACHINERY.
Brown-Hoisting Machinery Co.....Cleveland.

COMPASSES.
Ritchie, E. S. & Son.....Brookline, Mass.

COMPOUND—PIPE JOINT.
U. S. Graphite Co., Saginaw, Mich.

CONDENSERS.
Great Lakes Engineering Works....Detroit.
Wheeler Condenser & Engineering Co.....New York.

CONTRACTORS FOR PUBLIC WORKS.
Breymann Bros., G. H.....Toledo.
Buffalo Dredging Co.....Buffalo.
Dunbar & Sullivan Dredging Co....Buffalo.
Great Lakes Dredge & Dock Co....Chicago.
Levine, A. & Co.....Cleveland.
Starke Dredge & Dock Co., C. H...Milwaukee.
Sullivan, M.....Buffalo.

CONVEYORS, ELECTRIC.
Spence Mfg. Co. ...St. Paul, Minn.

CORDAGE.
Baker & Co., H. H.....Buffalo.
Buffalo Ship Chandlery & Supply Co.....Buffalo.
Columbian Rope Co...Auburn, N. Y.
Upson-Walton Co.....Cleveland.

CORK JACKETS AND RINGS.
Armstrong Cork Co..Pittsburg, Pa.

CRANES, TRAVELING.
Brown-Hoisting Machinery Co.....Cleveland

Generated on 2024-08-28 14:01 GMT / https://hdl.handle.net/2027/mdp.39015043584443
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN